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ABSTRACT

Voluntary reporting, household canvass, and diagnostic clinics were utilized in studying the prevalence, disabilities, and needs of handicapped children in two Georgia counties (population 48,200); community resources were surveyed. Of the population under 21, 10% had handicaps and, of these, two-thirds had multiple handicaps with an average of 2.2 handicaps per child. Physical disabilities were less frequent than nonphysical limitations. Service needs found greatest were for educational guidance and vocational aid; existing resources manifested gaps. Recommendations called for coordinating a statewide plan and strengthening the state's programs for special education, crippled children's services, vocational rehabilitation, and institutional care for retarded children. Findings regarding medical and socioeconomic factors are presented; and implications for program administration and community organization are discussed. Appendixes providing forms and other materials used in and resulting from the study comprise half of the document. (JD)

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GEORGIA STUDY OF HANDICAPPED CHILDREN

A REPORT ON A STUDY OF PREVALENCE,
DISABILITY, NEEDS, RESOURCES, AND
CONTRIBUTING FACTORS

IMPLICATIONS FOR PROGRAM ADMINISTRATION
AND COMMUNITY ORGANIZATION

EC004 813

SAMUEL M. WISHIK, M.D., Study Director and Author
Professor, Maternal and Child Health
Graduate School of Public Health, University of Pittsburgh

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Mrs. James N. Frazer
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CHAPTER I

Background, Objectives and Scope

In 1952, the Cerebral Palsy Society of Georgia decided that a survey was needed to determine the magnitude of the cerebral palsy problem in the state. The Crippled Children's Society of the State of Georgia agreed to co-operate in the study.

It was decided that the study should be done by professional workers and citizens of the state, so that the involvement of the very process of doing the study would be likely to have a continuing influence. The remarkably extensive participation of lay and professional citizens of the state is attested to by the study organization chart (Figure 1) and the credit list of persons and agencies in Appendix A. Major professional contributions at the state level were made by the Departments of Public Health and Education, the Medical Association, the University of Georgia, the Medical and Dental Schools of Emory University, and the Medical College of Georgia. This report is the product of many authors.

It was decided that as many conditions as possible should be included so that a community picture of the overall problems of handicapped children would result.

Children were considered handicapped by any of the following conditions which were disabling or limited their capacity in any way.

The twelve handicapping conditions or defects selected were:

Cerebral palsy
Cleft lip or palate
Cosmetic defect
Epilepsy
Eye abnormality or impairment of vision
Hearing impairment
Heart abnormality or rheumatic fever
Mental retardation
Orthodontic abnormality
Orthopedic or neuromuscular disturbance
Personality disorder
Speech impairment

The mere presence of a condition did not warrant its consideration. It was called a handicap if it was disabling or limited the child's capacity in in any way. The definitions so established appear in Appendix B.*

The broad objectives of the study were twofold: to measure the needs of handicapped children and to assess the adequacy of existing resources to meet those needs.

The first step in measuring the needs of handicapped children would be to estimate the prevalence of handicapping conditions among the child population. A mere count of the various diagnoses by heads, however, would be meaningless. Cerebral palsy, for example, could vary from a child who is mildly involved to one so severely incapacitated that institutional care is the only possible solution. The next step after a tally, therefore, must be to classify the children in terms of their functional disabilities. The third

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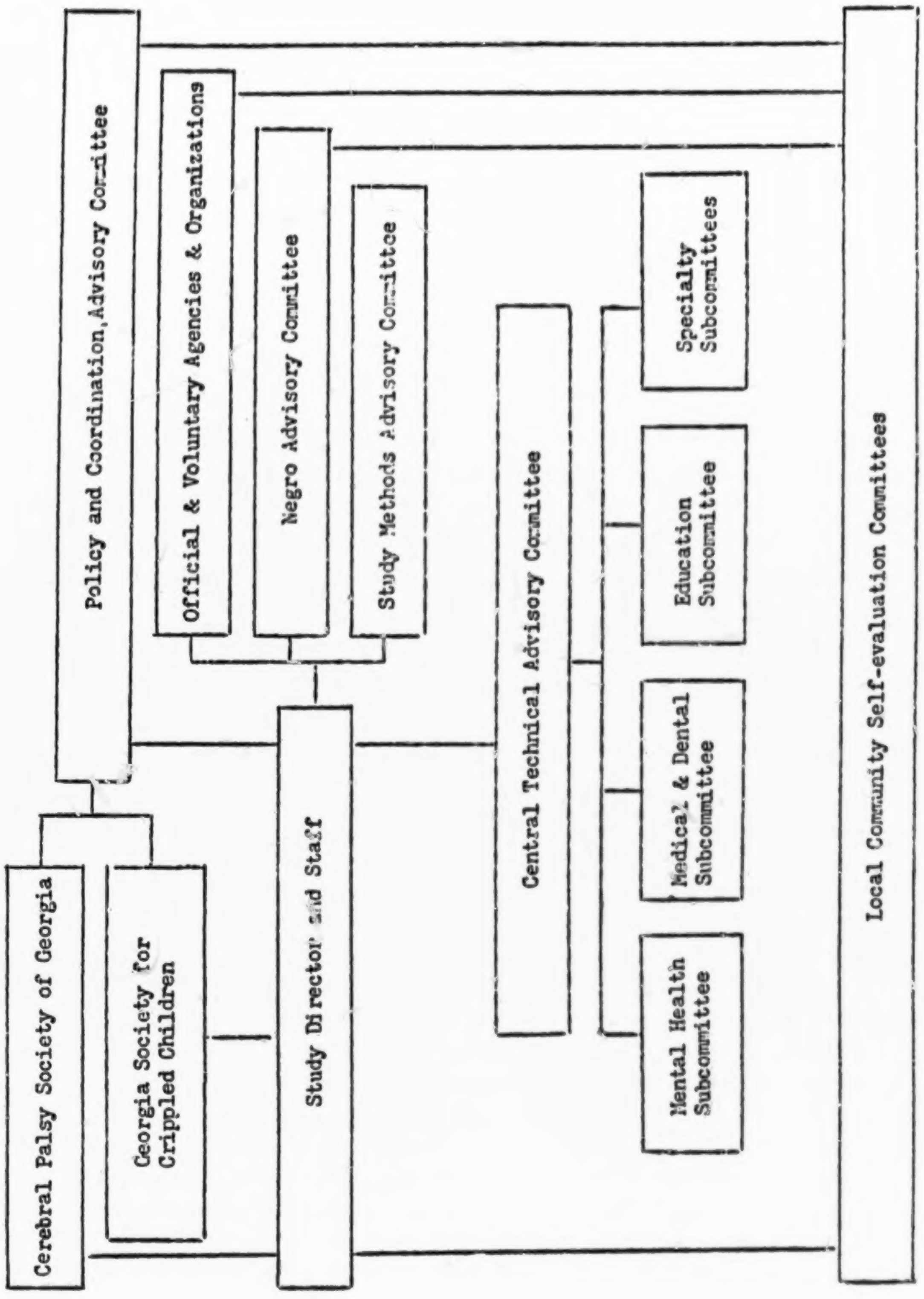
*Additional details appear in the classification of severity, pp. 26, 31


Policy and Coordination, Advisory Committee
Official & Voluntary Agencies & Organizations
Negro Advisory Committee
Study Methods Advisory Committee
Cerebral Palsy Society of Georgia
Georgia Society for Crippled Children
Study Director and Staff
Central Technical Advisory Committee
Mental Health Subcommittee
Medical & Dental Subcommittee
Education Subcommittee
Specialty Subcommittees
Local Community Self-evaluation Committees

Study organization chart.

step is to estimate the types and amounts of services to help the children overcome their disabilities insofar as possible. These three steps were taken in appraisal of a sample of children in two counties (Clarke and Oconee) as an illustration of the task that faces a community.

For the second main objective of the study, assessment of the adequacy of existing resources, fourteen counties were studied. Self-evaluating local committees matched their counties against a "blueprint of an ideal," comprehensive community program in respect to availability of categories of service.

Actual study, planning and preparation started early in 1953. The quantification study in Clarke and Oconee counties occurred between January and April, 1954. The community self-evaluations were done during 1954. A preliminary report was presented at the November 1955 Annual Meeting of the American Public Health Association, and was published in February 1956 issue of the AMERICAN JOURNAL OF PUBLIC HEALTH.[1]

CHAPTER II

Quantification Study in Clarke and Oconee Counties

The Setting of the Study

Clarke and Oconee counties are adjacent to each other and are located in the northeastern part of Georgia. They encompass an area of 313 square miles, with a total population of 48,200 in 1956. Oconee County is entirely rural except for the county seat of Watkinsville, a community of less than 700 persons. The bulk of the population of Clarke County resides in the City of Athens, the home of the University of Georgia. Faculty and students were included in the population totals. Two hospitals provide 204 beds in Athens. There are 42 physicians practicing in the community, including five pediatricians. There are seven dentists. The two county health departments have a full-time staff of fifteen persons.

Preparation of the Community

The process of community organization for the study took several months. Meetings were held with mayors and other government officials, personnel of the Departments of Health, Education and Welfare, Medical Society, and staffs of the Departments of Psychology and Sociology and the School of Education of the University.

Voluntary Reporting

With publicity through newspapers, radio, church, school and other channels, the community was well informed about the state-wide study and its objectives, and that Clarke and Oconee counties had been chosen for the Quantification Study of Handicapped Children. Notice was given of a three-week campaign during which all persons were asked to report to the health department all children whom they knew or whom they suspected of being handicapped. Definitions of the handicapping conditions were drawn up as sets of questions in lay terms and were given broad publicity. Copies of the questions were printed in the newspapers, cards for making the reports were widely distributed in churches and stores. (See Appendix F for questions and cards.)

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[1] Wishik, Samuel M., "Handicapped Children in Georgia: A Study of Prevalence, Disability, Needs and Resources", **American Journal of Public Health**, 46:2 (February 1956) 195-203.

The local medical society supported the campaign and its president asked the public and its members to co-operate; parents, physicians, and nurses responded. The schools reported children known to teachers. Because of the reporting campaign, the public schools instituted mass vision and hearing tests, and reported large numbers of children who failed those tests.

Table 1. Sources of Voluntary Reports (on 1,252 different children)

Sources	Number of reports
Schools	849
Physicians and nurses	176
Patients' families	158
Others	104
Total	1,287

As shown in Table 1, 1,252 children were reported during the campaign (henceforth referred to as "voluntary reporting"). The schools were the largest single source. The Crippled Childrens' Service of the State Department of Health allowed full use of its files. Private physicians, friends, and neighbors added very few cases that had not already been reported. (See Appendix G). The 1,252 children had 1,462 different presumptive diagnoses. (See Table 6 for diagnostic distribution of the reported cases.) (See page 6 for method of establishing presumptive diagnoses.)

Household Canvass

At the end of the three-week period of widespread voluntary reporting, an independent sample canvass of the community was made. (See Appendix H for basis for determining the size of the sample.)

In Athens the half-interval method of sampling was used. Specific addresses to be visited were based on the most recent city directory. By use of random numbers, an entry was made in the directory and thereafter every tenth address was selected for visitation. In the smaller towns maps of the areas were prepared. Numbers were assigned to each house located on the map. By use of random numbers 10 per cent of the houses were selected for visitation. In the open country areas, interviewers were assigned to areas clearly marked on county maps prepared by the University of North Carolina Statistical Bureau with instructions to visit all houses located within those areas.

Fifty-three volunteer women from 14 church groups were selected. Two briefing sessions and on-going supervision for two weeks were given by

University sociologists. (See Appendix I for interviewers' instructions.)

The questions asked by the interviewers were identical with those used for voluntary reporting, except on personality disorder. When the list of diagnoses to be included in the study was first being considered by the planning committee, inclusion of personality disorders was resisted by the study director because of concern about the difficulty of its definition and the possibility that it might overwhelm the rest of the study. The objection was later overruled. Under the leadership of the State Health Department, the group felt that this was too important a diagnostic category to be omitted. It was agreed, however, that the focus would be upon severe personality disorder.

The interviewers' questionnaire form also differed from the publicized questions in that it grouped the questions by diagnoses, included some instructions to the interviewer, gave opportunity for the respondent to make additional remarks and required the recording of certain identifying and family data. (See Appendix J for complete questionnaire.)

Tests of representativeness of sample

Table 2 gives details of the sample population. The extent to which the sample deviated from the 10 per cent goal in gross population groups is shown in Table 3. It is difficult to account for the low showing among the oldest group of children unless these had left the family, were living elsewhere as individual roomers and were not included in the family roster reported to the interviewers. Appendix K gives a more detailed breakdown and shows very close approximation of sampled to estimated racial and geographic population distributions.

Table 2. Composition of Canvass Sample in Clarke - Oconee Counties

Area and race	Number of households	Total, all ages	Total	Persons in households under 21 years of age with presumptive handicap reported
Total—all races both counties	1,001	3,471	1,373	201
Clark—Total	885	3,000	1,168	177
Urban (Athens)	656	2,148	815	105
White	448	1,407	492	67
Non-white	208	741	302	38
Unknown	—	—	21	—
Rural	229	852	353	72
White	186	649	248	49
Non-white	43	203	102	23
Unknown	—	—	2	—
Oconee—Total	116	471	205	24
White	85	332	134	18
Non-white	31	139	69	6
Unknown	—	—	2	—

The age distribution of reported children should relate to clinical knowledge on usual age of onset of different handicapping conditions. Both the voluntary and canvass reporting were uneven when looked at from this viewpoint. No cases of cleft palate were reported under five years of age. Educationally related conditions like speech, hearing and vision impairment and mental retardation were reported most frequently among school-age children.

Table 3. Comparison of Sample and General Population

Item	Census estimates Clarke - Oconee Counties	Sample families	Per Cent of total
No. of persons	39,184*	3,471	8.9
No. of households	11,218	1,001	8.9
Per cent of total non-white population	27	31	10.2
No. of persons under 21 years	16,082	1,373	8.5
0-4	4,094	375	9.1
5-9	3,738	359	9.6
10-14	3,069	327	10.6
15-20	5,181	308	5.9

*Adjusted estimate for population sampled in 1954.

Cross-check between voluntary and canvass reporting

The dual method of casefinding used in the survey offered opportunity for checking one technique against the other. Tables 4 and 5 show that three-fourths of the children reported by canvass had not been reported by the general voluntary campaign. On the other hand, 31 children were reported by the voluntary method but not by canvass, even though they belonged to sampled households. It is evident that these 31 cases are not all missed cases nor do they constitute a serious or significant correction of canvass findings. All but three were referrals by the schools and most of the conditions reported were educationally related. Nineteen of the 31 were said to have visual defect. Later in this report (see page 11) the validity and accuracy of the different reporting methods will be discussed in terms of actual findings at the clinics. Suffice it to say here that the accuracy and productivity of these 31 cases were far below those of the other groups.

Presumptive Diagnoses

While the group recognized that the questionnaires devised for locating children were screening techniques rather than diagnoses, to expedite the survey it was decided to call them "presumptive diagnoses." A presumptive diagnosis was made by the physician from an evaluation of the questionnaire, the answers to which pointed to one or more conditions for which we were searching.

Two hundred and sixty-seven diagnoses were established for 201 children (See Table 4 for distribution of presumptive diagnoses in the cases reported from the household canvass.)

Presumptive diagnoses compared with affirmative responses. Study of apparent usefulness of questions in terms of pediatric interpretation of responses.

It is of interest to see whether questions led to the same or other presumptive diagnoses. This cannot be done in all instances because, at times, combinations of responses rather than any one of them led the pediatrician to his presumptive diagnosis. However, the over-all degree of apparent validity in his eyes of different questions and groups of questions can be seen.

The presumptive diagnosis remained in the same group as the affirmative response 78 per cent of the time. (See Appendixes J and L.) A number of deviations were conspicuous. Question number 5, "Does he have unusual jerking of arms, legs, face or body?", which aimed at certain types of cerebral palsy, led to a presumptive diagnosis of epilepsy in half the cases. Questions 9, 10, 11 and 12 on speech led to a presumptive diagnosis of mental retardation or hearing impairment three-fourths of the time. Question 22, "Did he fail to walk by two years of age?", led more often toward an impression of orthopedic impairment than mental retardation. Questions 31 and 32 which aimed at petit mal and psychomotor epilepsy pointed toward personality disorder instead, most of the time. The questions on personality disorder led to mental retardation almost half the time. Of course, the final diagnosis derived from each question is of greater importance. Nevertheless, it is of interest that even the working diagnoses deviated from the purposes for which the questions were originally designed.

Diagnostic Clinics

Sampling for diagnostic clinics

Invitations were extended by mail, telephone or home visit and appointments were given for a series of diagnostic clinics. Parents were advised that no treatment would be given at the clinics, that the primary purpose was to make a survey, but that findings would be made available to the family physician by the local health department.

When the number of cases with a presumptive diagnosis for any one of the twelve handicaps was small from both canvass and voluntary reporting, all the children with that presumptive diagnosis were invited to clinic. When there were many cases with any given presumptive diagnosis, only a manageable number were invited to clinic. The likelihood of similarity or wide variation in clinical findings also affected the number invited. For example, hearing impairment, vision impairment and mental retardation are diagnoses that would be expected to belong to a more homogenous group than such diagnoses as cerebral palsy or personality disorder.

The canvass reporting with specific answers to questions was considered a more reliable case finding method than volunteer reporting. All cases reported by canvass were invited to the clinics, except hearing impairment.

When it was decided to invite less than 100 per cent of a group, selection was made by the random numbers method from alphabetically arranged patient cards. This assured random sampling among all children with the possible exception of siblings.

Whenever a child had more than one presumptive diagnosis, his card was included for sampling with each of his diagnostic groups.

Table 4. Clinic Attendance of Canvass Report Children

Presumptive diagnosis	Number reported	Number invited to clinic	Number seen at clinic	Per cent of those invited who came	Per Cent of total who came
Total	201	171	128	74.9	63.7
Cleft palate	1	1	1	100.0	100.0
Cosmetic	10	10	8	80.0	80.0
Epilepsy	12	12	6	50.0	50.0
Eye	56	53	42	79.2	75.0
Hearing	60	41	32	78.0	53.3
Heart	21	20	15	75.0	71.4
Mental retard.	15	14	10	71.4	66.0
Orthodontic	17	17	11	64.7	64.7
Orthopedic*	22	19	15	78.9	68.2
Personality	11	8	6	75.0	54.5
Speech	42	38	31	81.6	73.8

*Includes cerebral palsy.

Table 5. Clinic Attendance of Voluntary Report Children

Presumptive diagnosis	Number reported	Number invited to clinic	Number seen at clinic	Per cent of those invited who came	Per Cent of total who came
Total	1,252	514	415	80.7	33.1
Cleft palate	19	16	12	75.0	63.2
Cosmetic	31	25	23	92.0	74.2
Epilepsy	29	25	18	72.0	62.7
Eye	448	172	124	72.1	27.7
Hearing	245	59	49	83.1	20.0
Heart	63	60	46	76.7	73.0
Mental retard.	194	72	63	87.5	32.5
Orthodontic	20	18	15	83.3	75.0
Orthopedic*	170	98	82	83.7	48.2
Personality	29	22	22	100.0	75.9
Speech	214	66	58	87.9	21.1

*Includes cerebral p

Clinic attendance

There were 508 children seen at the clinics. Tables 4 and 5, show that 33 per cent of the voluntarily reported cases, 63 per cent of the canvass reported cases, and 36 per cent of the total attended. What is also of importance is the proportion of the invited children in each diagnostic and reporting group who attended.

Sequence of diagnostic clinics

The 12 handicapping conditions included in the study were scheduled for 10 different types of clinics by combining speech and hearing impairments into one group and cerebral palsy and orthopedic and neuromuscular disturbances into another. Twenty-five clinic sessions were set up five days a week over a five-week period. Since access to the diagnostic teams would not exist after the schedule was completed, attention was given to the sequence of clinics that would be most likely to fit the types of inter-clinic referrals that would be expected. It was decided to begin and end with clinics for mental retardation. Mental retardation and epilepsy were followed by cerebral palsy and neuromuscular disturbance clinics. Cleft palate, orthodontic and cerebral palsy clinics were followed by speech clinics. Two combined sessions for personality disorder and mental retardation came last.

Professional personnel appropriate to the schedule as laid out, made referrals to later clinics when available, or absorbed the service.

Professional composition of diagnostic clinics

All professional services at the clinics were volunteered and offered gratis by practicing individuals or agency personnel. Outstanding persons in the state in the various professional fields served on the clinic teams. It was agreed with the County and State Medical Societies that no locally practicing physicians would work in the clinics. This was done to maintain the survey purpose and non-treatment nature of the clinics consistently in the minds of the parents and the community in general. The professional disciplines represented on the different teams are listed in Appendix M.

Interviews were divided into routine and selective categories. In order to determine the number of patients to schedule for each session and the number of representatives of each professional discipline to have on a team, it was necessary to agree on an estimated average number of minutes that each person would require for his interviews and examinations, also the estimated proportion of patients that each different discipline would have to see. For example, a pediatrician would see all cases routinely. On the other hand, the speech pathologist usually would not see infants or very young children. Estimates were drawn up in advance of the scheduling and submitted to the team members for their revision and approval. Appendix M gives the estimated numbers of patients, length of time alloted to each and actual numbers seen. Naturally, the average amount of time required was greater for new patients than for revisits.

Clinic organization and procedure

Because of the nature of the project, travel and scheduling problems, each clinic was set up for an all-day session. The entire morning and sometimes part of the afternoons were spent by team members in holding individual interviews in separate rooms with patients and parents. The remainder of the afternoon was devoted to a staff conference on every patient seen during the day.

All patients were scheduled to be present at the beginning of the morning. Each left after all his individual interviews were completed. No patients or parents were asked to remain for the staff conference. This meant a clinic stay for each patient of approximately two to four hours.

Almost the entire clinical and office quarters of the Clarke-Oconee Health Department were given over to the clinics. Clinic traffic was directed by the consultant supervising public health nurse of the Crippled Children's Service of the State Health Department. She acted as intake officer, took part of the medical history, assigned personnel to rooms, kept on each patient's chart a check sheet of team members to see and those already seen, and assigned and directed patients from room to room with the help of a corps of volunteers. Before the family left the clinic, the public health nurse also helped give interpretation to them and arranged for return appointments. Volunteers served coffee, refreshments and lunch to patients, families and staff.

Clinic Findings

Handicapping conditions found

The children seen at the clinics were classified by the staff into:

No abnormal condition present.

Abnormal condition found, but not one of the twelve diagnoses covered by the study.

Abnormal condition among the twelve diagnoses, but not constituting a handicap.

One of the twelve handicapping conditions.

Table 6 gives the number of times that each of the twelve diagnoses was considered to constitute a handicap among all the children seen at the clinic.

Table 6. Total Number of Children with Each Diagnosis Found at Clinic (from all sources of report)

Diagnosis	Number of children
Cosmetic	159
Mental retard.	148
Personality	119
Speech	93
Orthopedic	69
Eye	67
Orthodontic	54
Hearing	43
Heart	42
Epilepsy	22
Cerebral palsy	20
Cleft palate	12

The fact that 848 diagnoses were made on 375 children indicates how often handicapped children suffer from more than one condition. Detailed listing of all combinations found appears in Appendix N. The combinations that occurred most often naturally were determined by the conditions that were seen most frequently at the clinics.

Since the total clinic case load was not a representative sample of the population, no prevalence implication is given to the following list of the six most frequent combinations that were seen:

Cosmetic defect and mental retardation.
Speech impairment and mental retardation.
Cosmetic defect and personality disturbance.
Cosmetic defect and orthopedic impairment.
Cosmetic defect and eye or visual impairment.
Speech impairment and personality disorder.

Clinic findings matched against presumptive diagnosis

In tabulating clinic findings for comparison of the two reporting methods, the fifty children reported both by the voluntary and canvass methods were included in both groups. For purposes of estimating prevalence, the thirty-one children from the sampled households who were reported by the voluntary but not the canvass method belong properly to the canvass group. They were tabulated separately, however, because of differences in findings and in attendance rates at the clinic. The method of their inclusion in calculating prevalence estimates is discussed later.

Tables 32-34, Chapter V, give detailed findings according to original presumptive diagnosis and shows the comparative accuracy of the voluntary and canvass reporting methods for the total groups seen and according to presumptive diagnosis. As would be expected, the interviewer's verbal recital of the questions item by item resulted in more over-reporting than the voluntary method; 48.6 per cent non-confirmation of presumptive diagnosis as against 36.6 per cent, respectively. With few exceptions, this relationship held for each diagnosis as well as the total group. Less than 50 percent accuracy occurred among cases reported for hearing and vision impairment. That this occurred among children reported after school screening tests suggests that the thresholds of those procedures were too low or the technique of testing not sufficiently consistent. The same occurrence among canvass reports on hearing and vision manifests the difficulty of the lay respondent's separating real hearing impairment from unrelated behaviour and the child who wears eyeglasses from the one with more severe defect in visual acuity. This confirms previous experience that standardized vision and hearing tests are needed for case findings of these two conditions. Cosmetic conditions and epilepsy were the other two conditions that had lowest degree of accuracy of canvass reporting. This is explained by extremely minor cosmetic conditions being reported by the interviewers, indicating that the questions were too all-inclusive. Also the questions that were aimed at picking up petit mal and psychomotor episodes apparently caught a variety of not too meaningful behavior pictures. Only one-third of these cases were diagnosed as epilepsy.

A certain amount of over-referral is desirable. Otherwise the criteria for reporting are presumed to be so rigid that other cases are excluded by them and missed. This is especially true when non-professional persons or non-medical workers share in the referrals. Furthermore, the definition of a handicap in this study excluded the mildest cases even though the presumptive diagnosis may have been correct. It is important to look beyond the question of nonconfirmation of the presumptive diagnosis and to note the frequency with which reporting of a case uncovered other handicaps in the same child. When all handicaps were tabulated 77.0 per cent of the voluntarily reported cases and 64.0 per cent of the canvass reported cases, that were seen, had some handicap. (Tables 32-34, Chapter V.) We are convinced that lay reporting, either by community campaign or personal interview, can be a valuable case-finding device that should be given serious consideration, especially if the referral is strengthened by some kind of screening procedure.

Another view of reliability of any case-finding procedure is the extent to which it fails to uncover cases that should be included. A partial indication of this aspect can be obtained by looking at the numbers of cases that would not have been found if the case-finding focus had been narrowed to any single handicapping condition. The limited diagnostic approach is a more common pattern than the multi-diagnostic interest, both in surveys and in operating programs. Table 7 gives for canvass reported cases the per cent of handicaps found in each group that would have been missed by lack of cross-referral between different presumptive diagnosis. The disparity reflects the difference between a diagnostic and a child-focused program.

Table 7. Case-Finding-Ineffectiveness of Single Presumptive Diagnosis (201 canvass cases)

	Number found by same presumptive diagnosis	Total number diagnosed	Per cent missed by same presumptive diagnosis
Cosmetic	3	35	91
Personality	3	22	86
Mental retard.	9	31	71
Speech	15	24	38
Epilepsy	2	3	33
Hearing	10	14	29
Orthodontic	10	14	29
Orthopedic and Cerebral palsy	11	15	27
Eye	16	20	20
Heart	8	8	0
Cleft palate	1	1	0

The three diagnoses with the highest proportion of cases that would have been missed by the single diagnostic approach deserve comment. All our findings indicate that mental retardation is not readily uncovered by family responses to rather direct questions. The families hopefully clutch at other associated symptoms and possible diagnosis.

In respect to personality disorder the large discrepancy between number of presumptive and final diagnoses is misleading. It should be noted that the questions on which presumptive diagnosis of personality disorder was made aimed at gross aberrations in behavior among children over seven years of age. On the other hand, the final diagnosis of personality disturbance included children of any age whose behavior deviations were associated with the presence of physical or mental handicap even though they may have demonstrated none of the specific personal and social maladjustments itemized on the questionnaire. Therefore the prevalence figures on personality disturbances presented in this report do not conform to the definitions established in the study (See Appendix B) as they include mild personal and family maladjustment associated with other handicapping conditions whereas the definition relates to gross personality disorder.

The handicapping condition that would have been missed most often without other presumptive diagnoses was cosmetic defect. The answer here lies in the purposeful attempt to avoid duplication of questioning by phrasing number 25 to exclude "any type of facial deformity not mentioned elsewhere." Therefore, strabismus, malocclusion, and cleft lip, among others, were not reported as cosmetic defects on the questionnaire but were so included in the final prevalence estimates.

Usefulness of specific questions and groups of questions in case findings (for canvass only). In Appendix P, the questions and groups of questions are evaluated according to four criteria, as follows:

1. When the question did elicit an affirmative response, how often was it a correct indication of the presence of the same condition? (Column 1) An arbitrary level of 50.0 per cent accuracy was set up as a desirable standard.
2. When the question did elicit an affirmative response, how often did it lead to the finding of a handicapping condition, though not necessarily the same one? (Column 2) An arbitrary level of two-thirds productiveness was set up as desirable standard.
3. How often did the question fail to uncover conditions? (Column 3) An arbitrary level of missing fewer than one-fourth of the cases was established as a desirable standard.
4. Did the question elicit an affirmative response at a frequency comparable to the ultimately estimated prevalence? (Column 4) For this purpose, an arbitrary level of one and one-half as many responses as expected cases was set up as a reasonable standard.

The eleven groups of questions (see Questionnaire in Appendix J) compared with the arbitrary standards as described in the following paragraphs.

Cleft lip or palate: The single question (1) which was a direct one and used the diagnostic terms themselves was answered with appropriate frequency and with reasonable accuracy;it lead to no additional children with other handicaps and missed no cases of cleft lip or palate among the children seen at clinic.

Cerebral palsy or orthopedic or neuromuscular disturbance: The group of five questions (2-6) received somewhat fewer than desired affirmative responses, gave fairly good acuracy and productiveness but missed almost half of the diagnosed cases. Each of the questions made a definite contribution to the effectiveness of the group in case finding.

Hearing impairment: The two questions (7-8) obtained more affirmative response than was warranted and consequently had low diagnostic accuracy. They also had rather low productiveness, but on the other hand missed few cases. The question of frequency of ear infections (8) had very little relationship to current status of hearing and produced so many over-referrals that it does not seem to be a desirable case finding question by itself. When not associated with other symptoms, a mere history of frequent ear trouble led to a finding of normal hearing two-thirds of the time. In the present study, the direct diagnostic question "Does he have known or suspected poor hearing?" (7) was relied upon because of the existence of the recent and extensive testing program in the schools. Otherwise, the question would have been far less appropriate. Indirect questions such as on inattentiveness were avoided because of the certainty that they would produce a tremendous number of inappropriate referrals. Periodic audiometric testing still seems to be the only dependable method of finding hearing impairment early.

Speech impairment: The six questions (9-14) in this group obtained an expected number of affirmative responses, a barely satisfactory degree of accuracy and productiveness of diagnoses and somewhat more than the desirable number of missed cases. As would be expected, the questions on late or unusual speech development in young children (9-10) led to the finding of mental retardation as often as that of speech impairment. All the questions were productive of finding some handicaps, the least so being the question on stuttering(13).

Eye abnormality or impairment of vision: The five questions (15-19) in this group obtained almost twice as many affirmative responses as expected and consequently had a very low accuracy rate, the lowest of any of the diagnoses. The productiveness rate was also low but the missed case rate was not above that selected as a reasonable maximum. The two questions on eyeballs and eyelids (15-16) were answered affirmatively very often but had a difference in value which was not unexpected. The phrase "defect of eyeball or eyelid" (15) proved of little help whereas the specific question on crossing, rolling or twitching of the eyeball (16) was extremely useful and quite accurate in finding disturbances of the external ocular muscles. The questions on 20/50 or 20/70 (17-18) seemed to have little exact meaning to the respondents and were apparently answered affirmatively when it was recalled that the school, clinic or physician had used some such fraction when reporting impairment of visual acuity. Their accuracy and productiveness rates were extremely low. The question on prematurity (19) was of no use whatsoever in a general study of this kind. It is evident that a periodic test procedure is preferable to questioning for finding vision disturbances, whereas supplementing the test with questions may improve case findings for muscle imbalance.

Mental retardation: The four questions in this group (20-23) had a very low response rate; consequently an unsatisfactorily high rate of missed cases. When the respondent did give an affirmative answer, the accuracy of the suspected diagnosis was very high. Few additional children with other handicaps were found through these questions. Each of the four questions was, however, contributory.

Cosmetic defect: The three questions in this group (24-26) produced the lowest response rate relative to ultimately estimated prevalence and the highest rate of missed cases of any diagnosis in the study. As stated before (see page 13), this apparently poor response was largely due to the exclusive phrasing of the question (25), "Does he have any type of facial deformity *not mentioned elsewhere?*" Even among affirmative responses, both the accuracy and productiveness were low. It is concluded that the questions used in the study are not of value in finding cosmetic defects. The high number of such defects found in the present study were usually associated with other handicapping conditions or were discovered among children referred for other reasons. Either some other case finding technique than the questionnaire is necessary, or better questions need to be designed.

Orthodontic abnormality: The two questions (27-28) in this group obtained affirmative responses at the same frequency as that of estimated prevalence and had a very high acuracy rate. Every child seen was found to have some handicapping condition and there were few missed cases. The questions proved eminently satisfactory.

Epilepsy: The four questions (29-32) in this group obtained the highest number of affirmative responses relative to estimated prevalence of any of the sets of questions and the lowest accuracy rate of any diagnosis in the study. This was largely due to the apparent inappropriateness of the two questions (31-32) which, as said before, aimed at finding petit mal and psychomotor episodes but which turned up mental retardation, personality disturbance and other conditions instead. Consequently, the productiveness rate for other conditions than epilepsy was satisfactory. All cases of epilepsy that were found were uncovered by the first two questions (29-30) that used the word "convulsion".

Heart abnormality or rheumatic fever: The three questions (33-35) in this group obtained a very high response rate and a low accuracy rate. This was due to the responses to the questions on abnormal heart sound (34) and suspected heart condition (35) which led to the finding of functional murmurs in most instances. In one respect, this is an extremely important type of "cases finding"—exposing "cardiac invalids" who need to be liberated from their physical and emotional shackles. The state of unnecessary invalidism is contributed to only partially by medical advice. Parental over-concern, despite medical counseling to the contrary, the neurotic fears of the children themselves, and school and community attitudes all solidify the unwholesome state. The over-all productiveness of the set of questions was satisfactory. Apparently, the diagnostic term "rheumatic fever" in the question was effective for case finding whereas the word "heart" was not.

Personality disturbance: The group of questions (36-38) appear to be poor as a case finding device (see Table 7), but this is due largely to the difference between the definition used at the time of screening with the questions and the definition of personality disturbance used in the clinics and the prevalence estimates. The majority of the affirmative responses to the questions were determined on clinical evaluation to have a moderate to severe personality disturbance. The majority of cases found, as for cosmetic defects, were associated with other handicapping conditions or family situations. Due to our decision in the midst of the study to accept mild conditions, particularly those associated with other handicapping conditions, it would be necessary to state that the questions used in the study were not adequately tested.

Estimated Prevalence of Handicapping Conditions

The estimated prevalence rates that were derived from the study are given in Table 40. Certain differences in rates from those given in a preliminary report of this study are due to more detailed and refined methods of adjustment that were used for the present final report, as described.

Method used for calculating estimated prevalence rates.

The method that was used is given here in detail because the final estimates depend so completely on the method of calculation, and because several complexities in attempting to derive total estimates were encountered. Obviously, because of incompleteness of attendance at clinic, the number of children found with any given condition had to be adjusted.

The parents might have failed to come because their children were very mildly affected or had no handicap at all. On the other hand, the children could have had such severe disability that clinic attendance was too great a burden. In one way or another, the absentees could well have introduced a bias into the group and must remain an unknown factor. In the study, there was no choice but to proceed with calculations on the assumption that the non-attenders were similar in every way to those examined at the clinics. The validity of this assumption is not only questionable for the total group but there may have been varying degrees of unreliability in the estimates for the different conditions covered by the study. For the record, Tables 4 and 5 give the percentages of those invited to the clinics who attended.

The non-attendance of one-fourth of those invited is an unfortunately appreciable proportion that persisted despite follow-up efforts and contacts with the home. An attempt to evaluate this group by special second questionnaire was considered but not undertaken because it was feared that more guesswork than clinical opinion would have resulted.

Tht fact that any given child might have been sampled for more than one presumptive diagnosis, or had more than one final diagnosis, was met by retaining an unduplicated count of children in the calculations. However, corrections that were made for incomplete clinic attendance had to be applied to all the presumptive diagnoses on which clinic invitations had been based. There was no other index of completeness of attendance except a gross one for the total group. Table 8 and Table 9 show how the numbers of

Table 8 Number of Each Final Diagnosis Found by Presumptive Diagnoses (201 canvass cases)

Presumptive diagnosis	Number reported	Number seen at clinic	Final Diagnoses Made at Clinic											
			Cerebral palsy (1)	Cleft palate (2)	Cosmetic (3)	Epilepsy (4)	Eye (5)	Hearing (6)	Heart (7)	Mental retard. (8)	Ortho-dontic (9)	Ortho-pedic (10)	Person-ality (11)	Speech (12)
(a) Cerebral palsy and Orthopedic	22	15	4	-	8	-	2	1	-	6	1	7	4	5
(b) Cleft palate	1	1	-	1	-	-	-	1	-	1	-	-	1	1
(c) Cosmetic	10	8	-	-	3	-	-	-	1	2	-	-	2	-
(d) Epilepsy	12	6	-	-	-	2	-	-	-	1	-	-	1	1
(e) Eye	56	42	1	-	14	-	16	-	2	7	3	1	4	2
(f) Hearing	60	32	1	-	4	1	2	10	3	6	1	1	6	6
(g) Heart	21	15	1	-	4	-	1	1	8	3	1	-	1	2
(h) Mental retard.	15	10	1	-	3	1	1	1	-	0	2	1	2	3
(i) Orthodontic	17	11	-	-	7	-	-	1	1	1	10	-	1	-
(j) Personality	11	6	1	-	-	-	-	1	-	4	-	-	3	2
(k) Speech	42	31	2	1	5	1	1	6	1	13	2	3	10	15
(m) Total number of children	201	128	5	1	35	3	20	14	8	31	14	10	22	24
(n) Total number of diagnoses	267	177	11	2	48	5	23	22	16	53	20	13	35	37

Table 9 Number of Each Final Diagnosis Found by Presumptive Diagnoses (Adjusted for incomplete clinic attendance.) (201 canvass cases)

Presumptive diagnosis	Attendance correction factor	Final Diagnoses Made at Clinic											
		Cerebral palsy (1)	Cleft palate (2)	Cosmetic (3)	Epilepsy (4)	Eye (5)	Hearing (6)	Heart (7)	Mental retard. (8)	Ortho-dontic (9)	Ortho-pedic (10)	Person-ality (11)	Speech (12)
(a) Cerebral palsy and Orthopedic	1.466	5.86	-	11.73	-	2.93	1.47	-	8.80	1.47	10.26	5.86	7.33
(b) Cleft palate	1.0	-	1.0	-	-	-	1.0	-	1.0	-	-	1.0	1.0
(c) Cosmetic	1.25	-	-	3.75	-	-	-	1.25	2.5	-	-	2.5	-
(d) Epilepsy	2.0	-	-	-	4.0	-	-	-	2.0	-	-	2.0	2.0
(e) Eye	1.333	1.33	-	18.66	-	21.33	-	2.67	9.33	4.0	1.33	5.33	2.67
(f) Hearing	1.875	1.88	-	7.5	1.88	3.75	18.75	5.63	11.25	1.88	1.88	11.25	11.25
(g) Heart	1.4	1.4	-	5.6	-	1.4	1.4	11.2	4.2	1.4	-	1.4	2.8
(h) Mental retard.	1.5	1.5	-	4.5	1.5	1.5	1.5	-	13.5	3.0	1.5	3.0	4.5
(i) Orthodontic	1.545	-	-	10.82	-	-	1.55	1.55	1.55	15.45	-	1.55	-
(j) Personality	1.833	1.83	-	-	-	-	1.83	-	7.33	-	-	5.50	3.67
(k) Speech	1.355	2.71	1.36	5.78	1.36	1.36	8.13	1.36	17.62	2.71	4.07	13.55	20.33
(l) Corrected total number of diagnoses		16.52	2.36	69.33	8.73	32.27	35.62	23.64	79.07	29.9	19.04	52.94	55.54
(m) From Table 8 row "n", actual number of diagnoses		11	2	48	5	23	22	16	53	20	13	35	37
(n) Adjustment factor = $\frac{\text{row "l"}}{\text{row "m"}}$		1.501	1.178	1.444	1.746	1.403	1.619	1.478	1.492	1.495	1.464	1.513	1.501
(o) From Table 8 row "m", actual number of children		5	1	35	3	20	14	8	31	14	10	22	24
(p) Adjusted number of children = row "n" x row "o"		7.51	1.18	50.55	5.24	28.06	22.69	11.82	46.25	20.93	14.64	33.28	36.02

different final diagnoses that were derived from each group of presumptive diagnoses were amended by the respective attendance correction factors. For example, in row *h* of Table 8, ten or two thirds of the 15 reported cases of mental retardation were seen at clinic. All findings in this row were therefore increased by a factor of 3/2 or 1.5, resulting in adjusted numbers as shown on Table 9. The total for each vertical column in Table 12, for example, 79.07 for Column 8, now represents the estimated number of times that the diagnosis of mental retardation would have been made if every child in the canvass with a presumptive diagnosis had been seen at the clinics after referral for each presumptive diagnosis held for that child. This would not be an unduplicated count for this diagnosis. There were 31 different children on whom the diagnosis of mental retardation was made, as shown in the total in Column 8. Because the children often attended more than one clinic, this diagnosis was made 53 times on the 31 children.

The next step in the calculation was to relate the amended total for each final diagnosis with the uncorrected total—in neither instance an unduplicated count. For example, in Column 8 of Table 9, 79.069 related to 53 in the corresponding column of Table 8, giving a factor of 1.492. The factor derived from this ratio was used to adjust the unduplicated count for the same diagnosis. For example, thirty-one different children found to have mental retardation (Column 8) multiplied by 1.492 gave an adjusted total of 46.25.

The next problem was that of adjusting for the thirty-one cases found through the voluntary reports but missed by the interviewers. These cases were not similar to the two hundred and one found by the canvassers, nor were they similar to the total group of 1,252 reported by the community campaign. Among those of the thirty-one who were seen at clinic, the per cent of accuracy as indicated by conformance between presumptive and final diagnosis and the per cent of productiveness of any final diagnosis were both 27.5. These were much lower than the 63.4 and 77 per cent respectively for the total voluntary group or the 51.4 and 64 per cent respectively for the canvass group. On the basis of the diagnoses made among those seen, the following additions were made to the totals of conditions found among the canvass sample: eye abnormality or impairment of vision, 4.0; personality disturbance, 3.0; speech impairment, 1.0; hearing impairment, 3.0; mental retardation, 4.0; other conditions, 0.0. Although the numbers of cases were very small, there was no choice but to prorate the findings and add to the total. The extent to which this correction affected the final estimates of prevalence is indicated in Table 10.

Prevalence estimates per 1,000 children were obtained by taking $\frac{1000}{1373}$ of the final unduplicated adjusted totals for each final diagnosis. These are given in Table 10. Total prevalence of all handicapped children regardless of diagnosis or combinations of diagnoses was derived directly from unduplicated count on punch cards and adjusted for over-all attendance rate. This assumes that the differences in completeness of attendance among the twelve diagnoses are ironed out in the total picture. Again, this assumption is not warranted but cannot be avoided.

Table 10. Effect Upon Estimated Prevalence Rates of Handicaps of Adjustment for 31 Children Not Reported by Canvassers

Estimated prevalence rates	Cerebral palsy (1)	Cleft palate (2)	Cosmetic (3)	Epilepsy (4)	Eye (5)	Hearing (6)	Heart (7)	Mental retard. (8)	Ortho-dontic (9)	Ortho-pedic (10)	Person-ality (11)	Speech (12)
Number per 1,000 children, based on 201 reported cases	5.47	0.86	36.82	3.81	20.43	16.52	8.61	3.68	15.24	10.66	24.23	26.24
Number per 1,000 children, adjusted for 31 children not reported by canvassers	5.47	0.86	36.82	3.81	23.35	18.71	8.61	36.6	15.24	10.66	26.42	26.97

Comments on probable accuracy of prevalence estimates and comparison with other prevalence estimates. *Cerebral palsy:* Since the questionnaire did not try to distinguish cerebral palsy from other types of orthopedic or neuromuscular disturbance, it is not possible to assess the case finding accuracy of the questions separately for cerebral palsy. The total orthopedic group of responses did seem to have appropriate frequency and reasonably good accuracy. Finding almost half the cases of cerebral palsy through other questions helped to raise the reliability of the ultimate totals.

Age specific rates were:

0- 4 yrs. — 2.9 per 1,000
5- 9 yrs. — 8.8 per 1,000
10-14 yrs. — 5.0 per 1,000
15-20 yrs. — 6.5 per 1,000

In keeping with other experience, relatively fewer cases were found in the earliest years, but the disproportion was not extreme. The delay in being able to make a definite diagnosis certainly limits the reporting of very young children. The numbers taper off in later childhood, partially because some of the milder cases may improve to the point of no longer falling within the definition of being handicapped. The prevalence therefore is estimated to be close to the calculated figure of *5.4 per 1,000 children* under twenty-one.

This is almost exactly the same as that of the 1948 New York State Study,[1] but is higher than most other estimates. Although the numbers were small in this study, it must be emphasized that all were clinically verified cases.

Cleft palate:

The nature of the responses to the cleft palate questions and their accuracy both in the canvass and voluntary reportings would suggest a high degree of reliability for the calculated prevalence figure if it were not for the very low rate and need for a larger sample for this particular diagnosis. Nevertheless, the end figure conforms closely to previous estimates of there being about one living child with cleft lip or palate under 21 years of age per 1,000 children in this age group. The estimated prevalence is therefore rested at the calculated figure of *8.6 per 10,000 children* under 21 years of age.

Cosmetic defect:

At least five of the diagnostic conditions covered in the study, cerebral palsy, cleft lip or palate, eye abnormality, mental retardation, and orthodontic abnormality, led to a secondary diagnosis of cosmetic defect.

It is therefore difficult to estimate the completeness of the study's case finding for cosmetic defects per se.

It appears, however, from the calculated prevalence estimate of *36.8 per*

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[1] New York State Department of Health. **Report of the New York State Joint Legislative Committee to Study the Problem of Cerebral Palsy** (Legislative Document No. 55). The Department, Albany, 1949. 6 pp.

1,000 children under 21 years of age that disfigurements and facial deformities of a handicapping degree are probably much more frequent than is usually believed.

Epilepsy:

Among the entire group of cases of epilepsy that were found in the clinics, all had been reported through the questions on convulsions. One might infer from this that few cases were missed by the sample, since even the doubly handicapped children were reported for the convulsions rather than other complaints. On the other hand, none of the cases was over nine years of age and greater weight was given to grand mal than to other types of epilepsy. For these reasons, the *calculated prevalence rate of 3.8 per 1,000 children under 21 is believed to be too low.*

Eye abnormality or impairment of vision:

The calculated prevalence of 23.3 per 1,000 children under 21 years of age falls between the extremes of reported figures for various definitions of eye disturbance, such as from approximately one per 5,000 children who are blind to 20 per cent or more who may need eye care. This study set its definition of visual handicap at a level at which a child, if not actually restricted in functional vision at the time, must rely heavily and constantly on refractive correction or is a candidate for developing disability beyond the corrective effectiveness of eyeglasses. In addition, of course, eye abnormalities other than visual impairment contributed to the total.

The questions used in the survey seemed to err more in the direction of over-referral than under-referral. Unnecessary referrals were high; cases detected by other questions were relatively low. The age specific calculated prevalence rates, however, were extremely uneven:

0- 4 years — 11.6 per 1,000
5- 9 years — 3.0 per 1,000
10-14 years — 12.1 per 1,000
15-19 years — 38.9 per 1,000

Furthermore, school reporting of visual impairment was quite low for colored children, probably due to less complete testing of vision in this group. The school reports to the parents undoubtedly influenced their responses to the interviewer's questions. This is evident in the fact that colored children constituted only 18.0 per cent of the voluntary reports for eye disturbances and 13.0 per cent of the eye cases diagnosed among those reported voluntarily. The calculated prevalence rate for colored children was approximately half that for white children. It is therefore probable that for the total group a more accurate rate for eye handicaps as here defined *would be higher than 23 per 1,000.*

Hearing Impairment:

Just as was the situation for vision, hearing impairment was reported in great excess, no doubt because the parent respondents were reflecting the reports of the public schools' audiometric testing program. Relatively few cases were uncovered through other questions. The age specific rates, of course, show low figures for the youngest age group when testing is less feasible, reliable and not often done. The peak prevalence during the early school years is in keeping with general experience that an appreciable portion of hearing impairment in childhood ultimately improves to the point of no longer constituting a handicap.

0- 4 years — 2.9 per 1,000
5- 9 years — 30.7 per 1,000
10-14 years — 20.3 per 1,000
15-20 years — 13.0 per 1,000

The calculated over-all rate of *18.7 per 1,000 children under twenty-one* is in keeping with other reports for somewhat similar definitions of hearing impairment. Hardy[1] estimates 24 per 1,000 handicapped; O'Connor and Davens[2] gives 15 to 30 per 1,000 school age children as sufficiently limited in hearing to need special education. The absence of the most severe types of deafness in the canvass group is not inconsistent with the size of the sample, but suggests that a somewhat higher rate than here estimated may be more accurate.

Heart abnormality or rheumatic fever:

Analysis of the study findings strongly suggests that the calculated prevalence rate of *8.6 per 1,000 children under twenty-one is too low.* Infants with congenital heart disease were not reported nor was the adolescent group adequately covered. The cases were concentrated in the school age group below fifteen years. Most studies reported to date find more than ten children per thousand with heart disease at school age. Obviously, the pre-school rate is much lower. The present study does not therefore contribute to our knowledge on the prevalence of heart disease in the earlier years of childhood.

Mental retardation:

The relatively large number of cases of mental retardation that were detected through responses to questions other than those which focused specifically on retardation does not necessarily mean that a low case-finding rate resulted. It was expected that case finding of mental retardation would occur through questions on cerebral palsy, hearing impairment, speech defect, epilepsy and personality disturbance; it did. The age specific rates, however, again show a disproportionate weighting in the school years, reflecting both the difficulty of early diagnosis and the traditionally poorer reporting if the adolescent or post-adolescent settles into an accepted position of limited responsibility.

0- 4 years — 8.7 per 1,000
5- 9 years — 57.1 per 1,000
10-14 years — 60.8 per 1,000
15-20 years — 19.4 per 1,000

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[1] Hardy, William G., Children with Impaired Hearing: An Audiologic Perspective (Children's Bureau Publication No. 326), U. S. Government Printing Office, Washington, D. C., 1952, 22 pp.
[2] Unpublished personal communication.

It seems reasonable to place the estimated prevalence of mental retardation as defined in this study somewhat *higher than the calculated figure of 36.6 per 1,000 children* under twenty-one years of age.

Orthodontic abnormality:

In addition to the high degree of accuracy of the responses to the questions on orthodontic abnormality, it was surprising to note the relatively low proportion of presumptive diagnoses. This suggests that there was reasonable approximation of the number of found cases to the number expected under the definition used in the study. The age specific rates also fall within an expected distribution.

0- 4 years — 8.7 per 1,000
5- 9 years — 13.2 per 1,000
10-14 years — 25.4 per 1,000
15-20 years — 19.5 per 1,000

The calculated rate of *15.2 per 1,000 children under twenty-one* is presented without suggestion for modification. This is far lower than most previous estimates and no doubt reflects the rather rigid criteria followed by the clinicians.

Orthopedic or neuromuscular disturbance:

Almost half the cases in this category that were diagnosed at the clinics were found through other questions than the orthopedic group. This suggests that the calculated prevalence rate of *10.6 per 1,000 children under twenty-one may be too low.* It is lower than most previous estimates. The age specific rates reveal the expected rise as acquired orthopedic conditions are added to the congenital deformities.

0- 4 years — 8.7 per 1,000
5- 9 years — 8.8 per 1,000
10-14 years — 10.1 per 1,000
15-20 years — 19.5 per 1,000

Personality disturbance:

The calculated rate of *52.9 per 1,000 children under twenty-one* is largely a reflection of maladjustment to physical or mental handicap among the children seen at clinic. Only one-seventh of the cases had no other one of the twelve handicaps than emotional disturbance manifested by behavior somewhat as described in the questionnaire. The age distribution therefore merely conforms to that of the total group seen. From the study data, it is impossible to say anything about the frequency of personality disturbance per se in children.

Speech impairment:

Almost half the cases found in this category were referred to clinic through other questions than those on speech. Seven-eighths of the diagnosed cases had another handicap closely associated with speech. This indicates that the effective focus of the questions and responses as well as the clinical examinations apparently was less on the functional than the organic types of speech impairment. The calculated estimate of *2.7 per 1,000 children under twenty-one* years of age is undoubtedly *too low*. The age specific rates follow the expected distribution:

0- 4 years — 8.7 per 1,000
5- 9 years — 52.7 per 1,000
10-14 years — 30.4 per 1,000
15-20 years — 19.5 per 1,000

Children with multiple handicaps

It is of interest to note how often a handicapped child has more than one handicapping condition. A third of the handicapped children seen at the clinics had only one of the twelve handicaps. (See Table 11.) Another third had two different handicapping conditions and the remainder had three or more. The average for all the handicapped children was 2.2 different diagnoses per child. As would be expected, children with cleft palate and cerebral palsy have the highest number of different handicaps with virtually none of them having merely one diagnosis. Heart disease had the fewest number of handicaps per child, but even here the average was about 1.5 (See Table 12).

Table 11. Frequency of Coexistent Diagnosis Among Handicapped Children

Number of diagnosis per child	Number of children with handicaps	Per Cent of children
1	123	32.8
2	115	30.7
3	73	19.5
4	44	11.7
5	20	5.3
Total	375	100.0

(Average: 2.2 diagnosis per child)

Table 12. Average Number of Coexistent Diagnoses for Each Diagnosis

Diagnosis	Average number of coexistent diagnosis
Cleft palate	3.8
Cerebral palsy	3.6
Speech	3.1
Orthopedic	3.0
Mental retard.	2.9
Epilepsy	2.9
Cosmetic	2.9
Orthodontic	2.8
Personality	2.8
Eye	2.6
Hearing	2.5
Heart	1.8

Classification of functional disabilities

After establishing the diagnosis, the second task of the clinical teams was to determine the nature of the functional disabilities resulting from the handicapping conditions. Appendix Q gives the form that was used and which listed the categories of disability that were established and which were identified insofar as possible for all the children seen, regardless of diagnosis. The focus was on the handicapping effect of a condition rather than on the mere presence of the condition, or even on its severity in a medical or physiological sense. For example, the complete absence of movement in an ankylosed joint would be viewed in terms of limitation of movement or abnormality of gait rather than the degree of destruction of the bony structures at the joint. A child with a history of rheumatic fever would be classified on the basis of functional limitation of his general activity rather than the nature of the valvular heart damage. Another way of describing the method of assessment of functional disability would be to say that primary attention was given to the child's residual capacities and limitations that existed after whatever medical care the child received, such as convulsions despite drugs, hearing loss in the better ear even if the other ear is stone deaf or visual loss in the better eye even if the other is completely unseeing.

Criteria for the four-point scale varied for each type of disability, as will be described separately for each later. In general, the criteria attempted to classify the children as follows:

None — if no disability or disturbance of a given function secondary to the condition existed even though the condition was detectable by the clinicians.

Slight — if a clean bill of health could not quite be given for the performance of a given function.

Moderate — if gross limitation of a given function existed but an appreciable residue of that function was being used effectively.

Severe — if the child was "crippled" or grossly incapacitated in respect to that function.

Prevalence and severity of functional disabilities

Table 16 showed the estimated prevalence of the disabilities among the child population of the two counties. It can be seen that the physical disabilities are all at the lower end of the list in frequency of occurrence as compared with non-physical limitations. There follows a presentation of each disability with comments on their estimated prevalence and severity distribution. Classification of severity is presented both for the canvass sample population and the total clinic group referred from all sources. The similarity of distribution of severity between the two groups is striking.

Walking:

Slight—Some gait disturbance, weakness or limitation, but only mildly restrictive of use of lower extremities.

Moderate — Definite limitation in use of lower extremities, but still permitting child to get about unassisted and without crutches or braces.

Severe — Extreme limitation in use of lower extremities or dependence upon prostheses or personal assistance in walking.

Eleven per 1,000 of the canvass child population had disability in walking. These were among the orthopedic, cerebral palsied and mentally retarded groups. The severity distribution was mild 40 per cent, moderate 20 per cent, and severe 40 per cent. Among the total group of patients with walking disability seen at clinic regardless of source of referral, the distribution was mild 38 per cent, moderate 34 per cent, and severe 28 per cent.

Use of upper extremities:

Slight—Unilateral, with some weakness or limitation of mobility or coordination, but only mildly restrictive of use of the upper extremities.

Moderate — Definite limitation in use of one upper extremity with or without mild involvement of the other, but still permitting child to use both hands for grasping and to bring hands to face.

Severe — Worse than above definitions.

Five per 1,000 of the canvass child population had some disability in the use of the proper extremities; 40 per cent were mild, 20 per cent moderate, and 40 per cent severe. In the total clinic group, the distribution among those with disability in use of upper extremities was mild 32 per cent, moderate 34 per cent and severe 34 per cent.

Limitation in general activity: The clinicians did not assess this item except when a child was almost completely incapacitated, such as by cardiac decompensation. Obviously, such patients were few and far between among the clinic attendants. The item has therefore been deleted from the findings for the canvass sample.

Cosmetic defect: A cosmetic defect acts as a disabling factor by producing personal or social maladjustment or interfering with education or vocation. It is therefore not here listed among the functional disabilities. It is interesting to note, nevertheless, that when cosmetic defects were found in the canvass sample, they were classified as mild 38 per cent of the time, moderate 43 per cent, and 18 per cent as severe. Among the larger group seen at clinic, 35 per cent were mild, 40 per cent moderate, and 21 per cent severe.

Function of teeth:

Mild — No dislocation of over-all normal relationship between the maxillary and mandibular arches; but sufficient irregularity or absence of teeth to warrant correction for improvement of chewing, speech or appearance.

Moderate — Some forward or backward mal position of the lower jaw in relation to the upper jaw (unilateral or bilateral).

Severe — Gross deformity of one or both dental arches or marked malocclusion or both.

Fifteen per 1,000 of the canvass child population had one of the above described disabilities in dental function. Thirty-six per cent were mild, 50 per cent moderate, and 14 per cent severe. In the total group, 33 per cent were mild, 49 per cent moderate, and 18 per cent severe.

Seizures: Examples of classification of severity in terms of seizures that occurred during the most recent year under the existing state or absence of medical supervision and drug therapy.

Mild — Not more than two grand mal attacks during the year or petit mal attacks recognized not more often than once a month.
Moderate — More frequent attacks than the above but grand mal not more often than once a month and petit mal not noticed more often than once a week.
Severe — Psychomotor attacks or more frequent grand or petit mal than the above.

Two per 1,000 of the canvass child population had seizures of sufficient frequency to constitute a disability. Among the total clinic group referred from all sources, there were enough cases of seizure to obtain a distribution pattern, which was 26 per cent mild, 37 per cent moderate, and 37 per cent severe.

Hearing impairment: Impairment in the *better* ear in terms of average decibels of loss of the 512, 1024 and 2048 frequencies.

Mild — 25-35 decibels of loss.
Moderate — 40-55 decibels of loss.
Severe — More than 55 decibels of loss.

Nineteen per 1,000 among the canvass child population had hearing disability as so defined. Sixty-four per cent were mild, 36 per cent moderate, and none severe. Among the total clinic group, 61 per cent were mild, 25 per cent moderate, and 14 per cent severe.

Visual acuity:

Mild — With correction, distance vision in the better eye of 20.40 to and including 20.60.
Moderate — With correction, distance vision in the better eye of 20/70 to and including 20/100.
Severe — Poorer vision than the above.

Sixteen per 1,000 among the canvass child population were disabled in one of the above classes. Forty-two per cent were mild, 42 per cent moderate, and 16 per cent severe. In the total clinic group, the distribution was almost identical — 38 per cent mild, 44 per cent moderate, and 17 per cent severe.

Speech: Examples of classification of severity — in terms of defects such as articulation, tonality, fluency or control inappropriate to the child's age.

Mild — Noticeable but not too conspicuous.

Moderate — Conspicuous but not resulting in appreciable reduction of intelligibility.

Severe — Interfering with effective spoken communication.

Twenty-six per 1,000 of the canvass child population conformed to one of the above classes. In the canvass group, 40 per cent were mild, 36 per cent moderate, and 24 per cent severe; compared with 36 per cent, 43 per cent, and 21 per cent respectively in the total clinic caseload.

Mental retardation: Examples of classification of severity — in terms of the Stanford Benet Test, Terman-Merrill Revision or its equivalent. When indicated, the Goodenough, the Bender Visual Motor Gestalt or other tests were used.

Mild — Estimated IQ between 70 and 79.
Moderate — Estimated IQ between 50 and 69.
Severe — Estimated IQ below 50.

Thirty-seven per 1,000 of the canvass child population had one of the above degrees of mental retardation. Of these, 47 per cent were mild, 37 per cent moderate, and 16 per cent severe; compared with 40 per cent, 33 per cent, and 27 per cent respectively in the total clinic group.

Maladjustment:

Assessment of maladjustment was divided into three parts — personality disorder, family maladjustment, and society's non-acceptance — in recognition of the cumulative if not separate impact of elements within the child, his family and society around him as well as with an eye to the different implications for preventive or corrective action.

Personality disorder: Examples of classification of severity — in terms of inappropriate degrees and character of self-regard, affect or hostility; behavior aberrations or, if another handicapping condition is present, lack of acceptance of it or realistic adaptation to it.

Mild — Deviations detectable by the Clinician but not gross or potentially serious.

Moderate — Gross deviations but not incapacitating.

Severe — Incapacitating deviations.

Twenty-five per 1,000 of the canvass child population were considered maladjusted. Sixty-five per cent of the cases were mild, 24 per cent moderate, and 10 per cent severe. In the total clinic group, 57 per cent were mild, 34 per cent moderate, and 9 per cent severe.

Family maladjustment to the handicap in the child:

Mild — Seem to accept the child warmly but do not give him balanced management or plan realistically in the light of the stated prognosis.

Moderate — Feelings and actions toward the child strongly tempered with guilt, non-acceptance of the stated prognosis, or rejection.

Severe — Gross rejection with or without over-compensation.

Thirty-five per 1,000 of the canvass child population were classified as coming from homes with one of the three degrees of family maladjustment; 54 per cent mild, 34 per cent moderate, and 11 per cent severe.

In the total clinic groups, the distribution was 53 per cent mild, 36 per cent moderate, and 10 per cent severe. Although the rate of family maladjustment in the canvass sample is similar to that for personal maladjustment of the children, these are far from the same groups. Eighteen of the thirty-two children with personal maladjustment came from poorly adjusted homes. Among the twenty-seven maladjusted family groups, two-thirds (18) were labeled as personally maladjusted.

Society's non-acceptance: The extent to which friends, neighbors, associates or employers accept a handicapped person may depart grossly from the individual's own maladjustment to his condition. Social rejection is compounded out of tradition, cultural standards of appearance and behavior and the character and severity of the outward manifestations of the condition. For each of the twelve conditions covered in the study, there was prepared for the clinical teams a list of factors that might have implications for society's non-acceptance (See Appendix S.) In terms of these factors, attempt was made to estimate the degree of non-acceptance that could be anticipated for each handicapped child, as illustrated below.

Mild — It is not likely that the handicap will be disregarded by those around the patient, but it will not carry very much weight.

Moderate — The conditions is likely to have a conspicuous effect on the attitudes and actions of others toward the patient.

Severe — The attitudes of others will probably be so adversely affected that the patient will be incapacitated socially and vocationally.

Fifty-two per 1,000 of the canvass child population seemed likely to face some significant degree of non-acceptance of their handicapping condition by society; 39 per cent to a mild extent, 47 per cent moderately, and 13 per cent severely. In the total clinic group, the distribution of society's rejection was 41 per cent mild, 38 per cent moderate, and 21 per cent severe among those for whom some rejection was considered likely.

Vocational limitation: Estimate of presence of limitation of vocational opportunity was made only for children in or approaching the age of employment; this was usually not lower than twelve years.

Examples of classification of severity.

Mild — Physical, mental or emotional disability or secondary interference with education is likely to place a somewhat restrictive ceiling on the patient's attaining elevated vocational status, but should not narrow the field or variety of vocational opportunity appreciably.

Moderate — Certain broad fields or types of work are definitely excluded from possibility for the patient.

Severe — There is little likelihood that the patient will achieve gainful employment in an unprotected environment.

Twenty-four of the total canvass group under twenty-one years of age were classified as having some degree of vocational disability. This translated into a rate of 6.5 per cent of all children twelve years of age or older in the community. Twenty-eight per cent of the vocational disability was classified as mild, 17 per cent moderate, and 55 per cent severe. The large number of severe restrictions among those who show any vocational limitations is striking. In the total clinic group, 24 per cent were mild, 35 per cent moderate, and 41 per cent severe.

Educational disability or special educational needs: These were estimated for the reasonably immediate future only for children in or approaching school age. The estimation was made in terms of the child's capacity for education at all, his requirement for special educational methods, or special placement to make ordinary education available to him.

Examples of classification:

Regular school program — Needs no modifications.

Modified school program — Can rather easily fit into a regular school program with minor adjustments or privileges.

Special day program — Can travel to school with or without special transportation; is reasonably manageable in personal care in the classroom; needs special education facilities or methods or ancillary services in a full or part time special setting.

Home — Can not be expected to leave home for education even with liberal criteria for school admission.

Hospital — Will probably be in a hospital for medical care for a protracted period and could profit from education while there.

Institution — Belongs in or expected to be placed in an institution permanently or for a protracted period of years; there to receive limited type of education or training.

None — Not educable; may be trainable to an extent in personal care.

Sixty-two per 1,000 of the canvass child population were classified as not being able to fit into a regular educational program. For the total group of children with handicaps (375) found at clinic, 44 per cent (165) were for regular education, 17.6 per cent (66) for modified, 14.9 per cent (56) for special day, 10.4 per cent (39) for institution, one for home instruction and the 48 others (12.8) per cent as not educable or educability indeterminate.

Co-existent disabilities

Just as handicapped children frequently have more than one handicap, so they often show several co-existent disabilities. Each disability cannot be handled most effectively without considering the child's other limitations which affect his responses to the management of any one of his disabilities. Appendix T gives the numbers of times different disabilities were co-existent for both the canvass cases and for all handicapped children found at the clinics. The latter covers more cases and gives a fuller picture of combinations of disabilities in a large number of handicapped children. No attempt is made to translate the date into estimates of prevalence, since the total clinic caseload was not sampled exclusively from the canvass population. In the following sections, percentages of more frequent co-existence (10 per cent or higher) are listed for each one of the disabilities.

Walking (68 children)

Social non-acceptance	— 70 per cent
Mental retardation	— 54 per cent
Use of upper extremities	— 45 per cent
Family maladjustment	— 44 per cent
*Vocational limitation	— 38 per cent
*Speech	— 36 per cent
*Personal maladjustment	— 30 per cent
Seizures	— 10 per cent

Cerebral palsy underlying the walking disability explains the rather high proportion of mental retardation, involvment of upper extremities and speech impairment.

All percentages are given for the total group even though some of the disability appraisals were made for selected age groups only. As noted, vocational limitation, speech and personal maladjustment (and sometimes mental retardation) were not estimated in the youngest children. The very high degree of social rejection is somewhat surprising, is also partly explained by the co-existent handicaps, but points up that, in general, people seem to be reluctant to accommodate the individual who cannot get around readily on his own two feet.

Use of upper extremities (35 children)

Social non-acceptance	— 91 per cent
Walking limitation	— 88 per cent
Mental retardation	— 71 per cent
Speech impairment	— 65 per cent
Family maladjustment	— 51 per cent
Vocational limitation	— 48 per cent
Personality disturbance	— 31 per cent
Seizures	— 20 per cent

Most causes of limited use of the upper extremities also produce or are associated with extensive other disabilities. These children are among the most crippled of all. Furthermore, people shun situations which might subject them to having to help in the personal care of a child who cannot manage his hands.

Dental function (62 children)

Social non-acceptance	— 43 per cent
Personality disturbance	— 37 per cent
Speech impairment	— 29 per cent
Family maladjustment	— 25 per cent
Mental retardation	— 24 per cent
Vocational limitation	— 17 per cent
Hearing impairment	— 10 per cent

Use of teeth is a rather specific function that has fewer co-existent disabilities than most of the others. Nevertheless, even here, the list of associated limitations that complicate the management of the patient's care is formidable. Society's rejection of these children for esthetic reasons was less frequent than for any of the other disabilities listed.

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*These items on all lists in the section on "Coexistent disabilities" do not cover all age groups.

Seizures (19 children)

Family maladjustment — 84 per cent
Social non-acceptance — 79 per cent
Mental retardation — 63 per cent
Personality disturbance — 52 per cent
Vocational limitation — 42 per cent
Speech impairment — 37 per cent
Walking limitation — 37 per cent
Use of upper extremities — 37 per cent
Visual acuity — 16 per cent

Again, cerebral palsy contributes to the extensive amount of disability. Nevertheless, the tremendous reaction of child, family and society is striking and the rank order of their frequency is dramatic. The family and society are more frequently disturbed than the child himself. The family feels the stigma and other people just do not like to be around anyone who might have a "fit". The high proportion with vocational limitation among the older children in the group again attests to cultural resistances and restricted opportunities superimposed upon the individual's actual limitation in capacity or work potential.

Hearing impairment (44 children)

Social non-acceptance — 50 per cent
Speech impairment — 50 per cent
Mental retardation — 38 per cent
Personality disturbance — 36 per cent
Family maladjustment — 27 per cent
Vocational limitation — 22 per cent
Dental function — 13 per cent

The frequency of personality disturbance was lower than expected and than has usually been described. Social non-acceptance too was of a lower order than all but one of the listed disabilities.

Visual acuity (48 children)

Social non-acceptance — 58 per cent
Mental retardation — 45 per cent
Personality disturbance — 39 per cent
Family maladjustment — 27 per cent
Vocational limitation — 27 per cent
Speech impairment — 18 per cent
Dental function — 10 per cent

Visual acuity had a lower order of frequency of associated disabilities than do most of the other functions studied. The relatively large proportion with social rejection was attributable to the cases with associated mental retardation or of very severe impairment of vision bordering on blindness.

Speech impairment (113 children)

Social non-acceptance — 81 per cent
Mental retardation — 63 per cent
Personality disturbance — 47 per cent
Family maladjustment — 43 per cent
Vocational limitation — 34 per cent
Walking limitation — 22 per cent
Use of upper extremities — 20 per cent

Mental retardation and cerebral palsy contributed to many of the associated disabilities; hearing impairment and malocclusion of the teeth to a lesser number. With or

Hearing impairment	— 19 per cent
Dental function	— 16 per cent

without other conditions, difficulty in verbal communication usually has an irritative effect on the listener that in turn fits into a vicious cycle of emotional disturbance, family maladjustment, social rejection and more speech disturbance. The finding of vocational limitation in 34 per cent of the total group does not begin to paint the full picture when the child reaches the age of employment.

Mental retardation (158 children)

Social non-acceptance	— 84 per cent
Vocational limitation	— 52 per cent
Personality disturbance	— 49 per cent
Speech impairment	— 45 per cent
Family maladjustment	— 43 per cent
Walking limitation	— 23 per cent
Use of upper extremities	— 15 per cent
Visual acuity	— 14 per cent
Hearing impairment	— 11 per cent
Dental function	— 10 per cent

Children with mental retardation truly suffer from multiple disabilities. Means of communication are impaired, destructive psychological reactions in the child and his family are frequent and the community looks upon them as outcasts. Of course, vocational limitation is present in 100 per cent of the cases old enough for this aspect to be considered.

Personality disturbance (163 children)

Social non-acceptance	— 73 per cent
Family maladjustment	— 65 per cent
Mental retardation	— 47 per cent
Speech impairment	— 33 per cent
Vocational limitation	— 31 per cent
Dental function	— 14 per cent
Walking limitation	— 13 per cent
Visual acuity	— 11 per cent
Hearing impairment	— 10 per cent

Listing the frequency of association of other disabilities with personality disorder helps to delineate the factors that probably contributed to the emotional deviations of the handicapped children as well as the common personal and group attitudes toward them that were engendered. The clinical staff judged that the resultant behavior and social relationships of the children coupled with other disabilities that were present would produce a reaction of non-acceptance about three-fourths of the time.

Family maladjustment (141 children)

Personality disturbance	— 75 per cent
Social non-acceptance	— 73 per cent
Mental retardation	— 49 per cent
Vocational limitation	— 37 per cent
Speech impairment	— 35 per cent
Walking limitation	— 21 per cent
Use of upper extremities	— 13 per cent
Dental function	— 11 per cent
Seizures	— 11 per cent

Here again some of the factors contributing to or associated with inability of the family to accept a handicapped child become clarified by the listing of associated disabilities.

Society's non-acceptance (216 children)

Mental retardation	—	60 per cent
Personality disturbance	—	54 per cent
Family maladjustment	—	47 per cent
Vocational limitation	—	44 per cent
Speech impairment	—	42 per cent
Walking limitation	—	14 per cent
Visual acuity	—	13 per cent
Dental function	—	12 per cent
Hearing impairment	—	10 per cent

This item completes the interrelated triad of the emotional and attitudinal impact of a handicap on the individual, his family and on society. It would seem that within the home, the individual and his family are somewhat less vulnerable to rejection by the outside world than they are to each other's disturbances. Only about half the time when society showed or seemed likely to show rejection was there demonstrable disturbance in the child or in his family. It is possible that more years of non-acceptance would be reflected in greater aberration in personal or family adjustment. The ages of the children and the duration of disability were no less, however, in respect to the item of society's non-acceptance than they were for the previous two items described above. Each of the latter showed associated disturbances in the other two elements of the triad about three-fourths of the time.

Severity of disabilities associated with each handicap

In order to assess disabilities in terms of a single handicapping condition, it is necessary to try to avoid the composite and confusing effect of co-existent but independent multiple handicaps on any given child. For this purpose, there were selected from among the total group seen at clinic from all sources of referral those children who had only one primary diagnosis. Each diagnosis made at the clinics was classified as primary or else secondary to one of the other twelve conditions studied whenever sufficient basis seemed to exist for such labeling. A number of examples of the distinction made would help to describe the method and purpose. Cerebral palsy, cleft lip or palate, heart abnormalities and orthopedic impairment were always labeled primary. Mental retardation that existed with cerebral palsy was considered secondary, the cerebral palsy primary. If mental retardation co-existed with heart disease, both were called primary. The distribution between primary and secondary classification among the total clinic patients is given in Table 13.

The following analysis covers only those children who had a single primary diagnosis. It seems valid to ascribe the effects of secondary conditions to the primary handicap, even though they may be somewhat indirect. A weighting was given to the disabilities according to the following score of values:

No disability	—	0
Slight disability	—	1
Moderate disability	—	2
Severe disability	—	3

The average score of each disability for each diagnosis was calculated.

Table 13. Primary and Secondary Relationships of Coexistent Diagnosis by Each Diagnosis*

Diagnosis	Number of children	Per cent defined as primary	Most common conditions to which diagnosis is secondary, when not primary
Cerebral palsy	20	100	
Cleft palate	12	100	
Cosmetic	159	16	Cleft palate, cerebral palsy, eye, orthodontic
Epilepsy	22	54	Cerebral palsy
Eye	67	97	Cerebral palsy
Hearing	43	91	Cleft palate, cerebral palsy
Heart	42	100	
Mental retard.	148	89	Cerebral palsy
Orthodontic	54	89	Cleft palate
Orthopedic	69	100	
Personality	117	26	All other conditions
Speech	93	40	Cleft palate, cerebral palsy, hearing, mental retardation, orthodontic, personality disturbance

*A total of 375 children had 536 primary and 312 secondary handicaps diagnosed.

Rather than number of children showing each disability to any degree of severity, the average gives an impression of total effect in terms of spread of severity. Only those disabilities attaining an average score of 0.5 or higher are listed for each handicap. (See Appendix T for complete data.)

Cerebral palsy (16 cases with no other primary diagnosis)

Society's non-acceptance	—	2.0
Walking limitation	—	2.0
Mental retardation	—	2.0
Use of upper extremities	—	1.6
Speech impairment	—	1.6
Vocational limitation	—	1.1
Family maladjustment	—	0.8
Seizures	—	0.5

Worthy of comment is the high score for mental retardation, equivalent to an average of moderately severe retardation for all the cases with only cerebral palsy as the primary handicap. In turn, this probably accounts for the low score (0.4) recorded for personality disturbance.

Cleft lip or palate (6 cases with no other primary diagnosis)

Speech impairment	—	1.8
Society's non-acceptance	—	1.8
Personality disturbance	—	1.5
Dental function	—	1.2
Mental retardation	—	1.1
Family maladjustment	—	0.7
Vocational limitation	—	0.6
Hearing impairment	—	0.5

The crucial importance of speech and personal adjustment are obvious. The average score for both functions was equivalent almost to moderate severity, despite treatment.

Cosmetic defect (16 cases with no other primary diagnosis)

The average score for society's non-acceptance was 0.9. All the other disabilities had an average score below 0.5, indicating that the general severity of reaction to the cosmetic conditions was not of a high order. Composite score for the cosmetic disabilities themselves was 1.5

Epilepsy (7 cases with no other primary diagnosis)

Family maladjustment — 1.1
Personality disturbance — 1.1
Society's non-acceptance — 1.0
Mental retardation — 0.6
Vocational limitation — 0.6
Secondary disabilities were not severe.

The composite score for the seizures themselves was only 1.1, indicating that almost all the cases in this group were mild.

Eye abnormality or impairment of vision (28 cases with no other primary diagnosis)

Visual acuity — 1.1
Society's non-acceptance — 0.8
Mental retardation — 0.6
Vocational limitation — 0.5

Few diabilities resulted in this group.

Hearing impairment (18 cases with no other primary diagnosis)

The average score of severity for the hearing impairment was 1.3. All the other disabilities had a score below 0.5.

Heart abnormality or rheumatic fever (25 cases with no other primary diagnosis). None of the disabilities attained an average score of 0.5 or higher in this group.

Mental retardation (45 cases with no other primary diagnosis)

Mental retardation — 2.0
Society's non-acceptance — 1.7
Vocational limitation — 1.4
Family maladjustment — 0.8
Personality disturbance — 0.7
Speech impairment — 0.6

The average score of 2.0 for the mental retardation indicates a rather high degree of severity for the group as a whole despite the absence of other primary handicaps.

Orthodontic abnormality (19 cases with no other primary diagnosis)

Dental function — 1.6
Cosmetic defect — 1.4

Orthopedic or neuromuscular disturbance (28 cases with no other primary diagnosis)

Society's non-acceptance — 1.1
Walking limitation — 1.0
Vocational limitation — 1.0

Mental retardation	—	0.8
Personality disturbance	—	0.5
Family maladjustment	—	0.5

Personality disturbance (18 cases with no other primary diagnosis)

Personality disorder	—	2.2
Family maladjustment	—	2.2
Society's non-acceptance	—	1.6

The average level of personality disturbance in this group was quite severe.

Speech impairment (14 cases with no other primary diagnosis)

Speech impairment	—	1.5
Society's non-acceptance	—	0.7
Personality disorder	—	0.6
Family maladjustment	—	0.5

Amounts and types of services needed

The third responsibility of the clinic teams was to estimate what services were needed for the children. The estimate of type and amount of service needed by each child was made in reasonably immediate terms just as it is ordinarily done in the medical care of any patient. But it was done for each child at the staff conference, so that the final decision of the team was accepted rather than each member independently recommending his own respective type of treatment. The findings were then compiled for the entire group without regard to diagnosis. Tables in Appendix U give the basic data on services recommended for patients seen at clinic. The data, organized by presumptive diagnoses, were adjusted for incomplete attendance by the same method that was used to calculate estimated prevalence of handicapping conditions and disabilities.

The types of services followed the listing of the community blueprint (see Appendix W). Certain services, however, were not recorded by the clinicians even when the services were considered during the team discussions. It was evident that a single visit by the child and family did not furnish enough basis for decisions on some of these services, such as whether or not a child would adapt to a hearing aid. In other instances, the professional staff were not in the habit of thinking of services that were not readily available in their communities. In this group could be included special recreational programs for handicapped children and educational activities for their parents. It was difficult for the clinic personnel to theorize on services which they knew would not be within reach for some time to come. For one reason or another, therefore, the following services cannot be estimated in quantitative terms:

Occupational therapy and consultation.
Furnishing hearing aids and eye prostheses.
Foster care or short-term temporary institutional care.
Education at home or in hospital.

Special recreational programs.
Parent educational activities.

Recommendations for various types of therapy were made in terms of hours per week when direct patient therapy was indicated. Emphasis was also given to the potential role of the therapists as consultants to other professional persons and to the parents so that the direct handling of the patient did not remain the sole responsibility of the therapist. In making their estimates for any child, the clinicians tried to look beyond the first weeks of initiating a new regimen or overcoming a backlog of previous inadequate care. On the other hand, they could not crystal-gaze a year or two ahead. In general, the figures can be supplied as a cross-section of services needed at any given time and which would continue to be needed at approximately the same rates for these patients or subsequent ones who would take their places.

The recommended hours of therapy per week and number of cases that might profit from indirect therapy or consultation were combined grossly into numbers of professional persons in each field of work that would be needed per 1,000 children under 21 years of age in the community. The estimated number of full-time workers or their equivalents in part-time work devoted to the twelve categories of handicapped children are given in Table 17.

In addition, the recommendations for other services were translated into rates for children in the total community. (Also shown in Table 17.)

Among all the handicapped children seen at clinic from all sources of referral, the recommended services were tabulated according to the portion of the children who needed each of the more common services (Table 14).

Further details on services recommended may also help to clarify the thinking of the clinicians and the meaning of their recommendations in relation to medical and educational practices elsewhere.

Among the children for whom physical therapy was recommended, the average number of treatment sessions was 1.2 per week. For speech therapy,

Table 14. Prevalence of Certain Service Needs Among Handicapped Children

Services Needed	Per Cent of Handicapped Children
Rehabilitation appraisal and plan	100
Counseling, guidance and parent education	70
Special education	34
Short-term Hospital care	31
Vocational aid	18
Therapies (PT, OT, orthoptics)	15
Orthodontic	10
Institutional care	10

the average was two sessions per week; and for orthoptic training, 1.3 per week. When home nursing care was advised, the average time per child was 1.5 hours per week. When social work was recommended, it was defined as medical social work that was needed 54 per cent of the time, psychiatric 33 per cent, and child welfare work in 5 per cent of the cases.

Among the children in need of hospital care for diagnostic work-up, establishment of treatment regimen or other non-surgical reasons, 92 per cent were for short-term stay of less than two weeks. The most frequent diagnoses for which hospitalization was recommended were epilepsy (28 per cent), heart conditions (22 per cent), and cerebral palsy (14 per cent).

When hospital care was needed for surgery, 87 per cent of the cases needed short-term care under two weeks, 5 per cent were estimated to require between two weeks and two months and the remaining 8 per cent longer hospitalization. The most frequent diagnoses warranting surgical treatment in a hospital were orthopedic (32 per cent), ophthalmologic (22 per cent, otologic (10 per cent), cleft lip or palate (3.5 per cent), and general conditions not directly related to a handicap (22 per cent), e. g. tonsillectomy).

Chief indications for convalescent care were orthopedic (69 per cent), plastic surgery (17 per cent), and cardiac (13 per cent). Ninety-one per cent of the long-term institutional care was for severe degrees of mental retardation.

The primary reasons for advising special educational placement were mental retardation 70 per cent of the time, orthopedic 13 per cent, severe impairment of vision 11 per cent, and hearing impairment 13 per cent.

Services needed for each diagnosis: For over-all community planning, this report has presented estimates of types and amounts of services needed for a broad group of handicapped children without separate regard to specific diagnoses. There are occasions in the development of specialized programs when it would be helpful to have quantitative approximations of services for children of selected diagnoses within a single diagnostic group. Therefore, the service need estimates are here presented separately for each of the twelve diagnoses. Admittedly, the service needs develop out of the associated handicaps that exist as well as the one under which they are given. But it is clear that any program that focuses on a single handicap must give consideration to the varied and multiple needs of the children with that handicap, whether those needs stem from that handicap or from some other coexistent condition. Because of the greater number of cases in the total group seen at clinic than in the canvass sample alone and because of the great similarity in case material in the two groups, the following figures are derived from the total rather than the restricted group. The figures give percentages of children in each diagnostic group for whom certain services were most frequently recommended and do not attempt to state these in terms of total community values or rates. It is assumed that 100 per cent of all diagnostic groups require a comprehensive rehabilitation appraisal and plan of care.

Cerebral palsy (20 cases)

Physical therapy — 56 per cent
Social work — 43 per cent
Occupational therapy — 39 per cent
Short-term hospital care — 39 per cent
Orthopedic appliance — 35 per cent
Long-term institutional care — 35 per cent
Special day education — 26 per cent
Speech therapy — 22 per cent
Vocational aid — 13 per cent
Orthodontics — 9 per cent
Home nursing care — 9 per cent
Convalescent care — 4 per cent

Worthy of comment are the extensive battery of therapies required and the need for institutional placement for one-third of this group and for special daytime education in one-fourth. The figure on vocational aid is as low as it is partly because of the young age of many of the patients and the absence of vocational potential in the most severe cases.

Cleft lip or palate (12 cases)

Social work — 75 per cent
Speech therapy — 58 per cent
Hospital care — 50 per cent
Vocational aid — 42 per cent
Special education — 33 per cent
Home nursing care — 25 per cent
Oral prosthesis — 25 per cent
Covalescent care — 16 per cent
Hearing aid — 8 per cent
Institutional care — 8 per cent

The frequent persistence of speech defect constituted the basis for most of the service needs. Half the children needed hospitalization for plastic surgery to improve cosmetic appearance.

Cosmetic defect (159 cases)

Hospital care — 47 per cent
Social work — 42.8 per cent
Vocational aid — 21 per cent
Orthopedic appliance — 18 per cent
Physical therapy — 18 per cent
Orthodontics — 16 per cent
Institutional care — 16 per cent
Special education — 15 per cent
Home nursing care — 11 per cent
Speech therapy — 10 per cent
Convalescent care — 10 per cent
Occupational therapy — 6 per cent
Orthoptics — 5 per cent
Oral prosthesis — 3 per cent

The service needs indicate the wide variety of defects that might fall under a plastic surgery or cosmetic correction program.

Epilepsy (22 cases)

Social work — 82 per cent
Hospital care — 48 per cent

The great need for personal and family coun-

Institutional care	—	27 per cent
Vocational aid	—	27 per cent
Special education	—	9 per cent
Physical therapy	—	9 per cent
Occupational therapy	—	9 per cent
Orthopedic appliance	—	4 per cent

seling is obvious. Short-term hospital care was for stabilization of drug therapy regimen and would not be expected to be a recurrent item in most cases. Frequent recommendation for institutional placement reflects the severe cerebral palsy often found in a group of children suffering from seizures. The low number of children for whom special education was advised is worthy of note. Even among these, all were recommended for a modified program because of other coexistent handicaps rather than because of the epilepsy. This denotes the clinic team workers' belief that children suffering from convulsions can usually fit into the regular classroom program.

Eye abnormality or impairment of vision (67 cases)

Social work	—	43 per cent
Hospital care	—	35 per cent
Vocational aid	—	19 per cent
Orthoptic	—	16 per cent
Special Education	—	10 per cent
Home nursing care	—	7 per cent
Orthodontic	—	7 per cent
Speech therapy	—	6 per cent
Institutional care	—	6 per cent
Physical therapy	—	4 per cent
Occupational therapy	—	3 per cent
Orthopedic appliance	—	3 per cent
Eye prosthesis	—	1.5 per cent

The variety of service needs reflects the frequency of coexistent diagnoses. Short-term hospital care was largely a non-recurrent item for a backlog of corrective surgery. The clinicians apparently believed that most children in this group belong in regular classes. In only 3.0 per cent of the children with eye handicaps was special education advised for that reason.

Hearing impairment (43 cases)

Hospital care	—	50 per cent
Social work	—	49 per cent
Vocational aid	—	26 per cent
Speech therapy	—	23 per cent
Special day education	—	21 per cent
Hearing aid	—	14 per cent
Lip reading	—	9 per cent
Physical therapy	—	7 per cent
Convalescent care	—	5 per cent
Resident education	—	5 per cent
Orthodontics	—	5 per cent

Short-term hospitalization was indicated chiefly for treatment to reduce chronic middle ear infection. This would not be a recurring item.

Heart abnormality or rheumatic fever (42 cases)

Social work	— 49 per cent
Hospital care	— 35 per cent
Home nursing care	— 21 per cent
Vocational aid	— 14 per cent
Orthodontics	— 11 per cent
Special education	— 9 per cent
Convalescent care	— 7 per cent
Occupational therapy	— 5 per cent
Orthopedic appliance	— 5 per cent
Oral prosthesis	— 5 per cent

In all the children for whom special education was recommended, the indication was another co-existent handicap and not the cardiac condition.

Mental retardation (148 cases)

Social work	— 57 per cent
Special education	— 30 per cent
Institutional care	— 25 per cent
Vocational aid	— 24 per cent
Hospital care	— 22 per cent
Physical therapy	— 11 per cent
Orthopedic appliance	— 7 per cent
Convalescent care	— 5 per cent
Home nursing care	— 3 per cent

Any program for mentally retarded children must give or arrange for some degree of orthopedic care.

Orthodontic abnormality (54 cases)

Orthodontics	— 65 per cent
Social work	— 56 per cent
Hospital care	— 36 per cent
Home nursing care	— 18 per cent
Vocational aid	— 18 per cent
Special education	— 13 per cent
Oral prosthesis	— 13 per cent
Speech therapy	— 10 per cent
Institutional care	— 9 per cent
Physical therapy	— 7 per cent
Occupational therapy	— 7 per cent
Orthoptics	— 4 per cent
Hearing aid	— 4 per cent
Convalescent care	— 4 per cent

Most of the service items reflect the coexistence of an orthodontic abnormality with other handicapping conditions. Of most direct relationship are orthodontic treatment, oral prosthesis and speech therapy.

Orthopedic or neuromuscular disturbance (69 cases)

Hospital care	— 48 per cent
Physical therapy	— 45 per cent
Orthopedic appliance	— 42 per cent
Social work	— 41 per cent
Vocational aid	— 26 per cent
Convalescent care	— 23 per cent
Institutional care	— 13 per cent

The orthopedically handicapped group require a tremendous amount of costly service in hospital, convalescent and long-term institutional care and in physical therapy

Special education	—	10 per cent
Speech therapy	—	9 per cent
Home nursing care	—	9 per cent
Occupational therapy	—	3 per cent
Hearing aid	—	3 per cent

and orthopedic appliances. Only 2.0 per cent of the children were recommended for special education because of the orthopedic condition.

Personality disturbances (119 cases)

Social work	—	80 per cent
Vocational aid	—	28 per cent
Special education	—	26 per cent
Hospital care	—	26 per cent
Physical therapy	—	13 per cent
Orthodontics	—	8 per cent
Orthopedic appliance	—	8 per cent
Convalescent care	—	8 per cent
Home nursing care	—	7 per cent
Institutional care	—	7 per cent
Occupational therapy	—	4 per cent

Except for coexistent handicaps, the outstanding need of this group is for mental health counseling. Special education was advised because of the personality problem in 6.0 per cent of the total group.

CHAPTER III

Medical and Socio-economic Factors

Direct comparison between the two groups of families, those in which a handicapped child was or was not found, was not possible because methods of obtaining the information differed.

Diagnosed cases of handicap had detailed interviews at the clinics, whereas most of the families without handicaps furnished information at the door-to-door interview, which was less intensive than the clinic investigation.

For other items, data only on diagnosed cases are available and are presented for documentation and interest to other investigators. Probably, the chief value of the material rests in the comparison of one diagnostic group with another, especially when such comparison in many criteria suggests a consistent trend.

Familial data

Frequency of other handicaps reported among relatives.

Parents who accompanied children to clinics were asked whether there were any "similar conditions" in the family and among close relatives. Replies of an affirmative, negative or uncertain nature were obtained and recorded on 282 of the 375 families with a handicapped child. Table 15 shows that among these, 38 per cent reported the presence of a condition similar to that of the handicapped child. In ten per cent, the apparent repetition occurred among siblings and in seven per cent among parents. Maternal and paternal sides of the family were affected equally.

The validity of the responses for different diagnoses obviously must vary. Certain conditions are quite common and would be expected to be reported often. Included here would be cosmetic and heart conditions, the latter especially among older relatives. On the other hand, diagnoses that are very specific would probably be more validly reported and therefore are likely to be understated as to frequency of multiple occurrence in the families. This group includes cleft palate, mental retardation, epilepsy and cerebral palsy.

Table 15 also shows how the different diagnoses varied in frequency of reporting of a similar condition in the family. Several possible highlights appear. Epilepsy and cleft palate had a high frequency of multiple familial occurrence. Epilepsy and speech difficulty frequently occurred in more than one sibling. They occurred also in the mothers and maternal relatives in sharp contrast with infrequent occurrence on the paternal side of the families.* Cerebral palsy seldom was reported in more than one child in a family and, would be expected, did not occur among the parents or close parental relatives. The cerebral palsied person does not often marry and have children.

Consanguinity

Information on consanguinity of parents was available for 265 of the 375 cases of diagnosed handicaps. Of these, 1.8 per cent reported some degree of kinship.

Age of parents (Table 16)

Data on age of parents at time of birth of the handicapped child are available for 263 of the 375 families with handicapped children. Although the numbers are small for some of the diagnoses, the findings are of interest. They would have been more meaningful if the cases had been identified for this table as having been congenital, neonatal or subsequent in origin. On a theoretical basis, four of the diagnoses are selected as having the strongest prenatal etiologic association; cleft palate, mental retardation, epilepsy and cerebral palsy.

The median age of the fathers at the time of birth of the handicapped children was 30 years. Of the group, 30 per cent were 35 years or over; 13.7 per cent were 40 or over; and 6.0 per cent were 45 or over.

The diagnoses with the highest percentage of upper-age fathers were: for fathers 35 years and over, cerebral palsy (54.5 per cent)

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*The fact that the mother answered the questions in most cases could influence the outcome in one or the other direction.

Table 15

Multiple Cases In Family

Similar Diagnosis Reported Among Families With A Diagnosed Handicapped Child

Diagnosis	Number of Families Interrogated	Number Reporting Another Case	Percentage Reporting Another Case	Percentage Reporting On Affected Sibling	Percentage Reporting On Affected Parent	Percentage Reporting Maternal Side Affected	Percentage Reporting Paternal Side Affected	Percentage Reporting More Than One Additional Case
Cerebral Palsy	23	1	4.0	4.0	0	0	0	0
Cleft Palate	12	3	25.0	8.3	8.3	8.3 - 16.6	0 - 8.3	0
Cosmetic	24	6	25.0	20.8	0	0	4.2	8.4
Emotional Disturbance	27	4	14.8	0	14.8	7.4	7.4	7.4
Epilepsy	10	6	60.0	30.0	20.0	30.0	0	10.0
Eye	62	12	19.3	9.7	14.5	8.1	6.4	19.3
Hearing	40	5	12.5	0	10.0	7.5	5.0	7.5
Heart	41	16	39.0	4.9	12.2	24.4	21.9	17.1
Mental Retardation	129	16	12.4	6.2	1.6	2.3	4.6	1.6
Orthodontic	48	10	20.1	6.2	8.3	8.3	10.4	20.1
Orthopedic	62	9	14.1	4.8	8.1	6.4 - 8.1	6.4 - 8.1	6.4
Speech	38	11	28.9	18.4	13.2	21.0	7.9	23.7
Number of Different Children	282							

Table 16 Age of Parents at Time of Birth of Handicapped Children

Number of Children

Age Group of Father	Total	Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
15-19	5	0	0	2	1	1	0	1	0	2	0	0	0
20-24	47	2	3	21	16	2	11	7	5	18	7	9	13
25-29	7	3	2	36	23	1	12	7	10	22	21	15	21
30-34	54	0	1	24	10	1	10	5	9	17	11	10	11
35-39	44	4	2	19	12	2	15	6	6	13	5	7	11
40-44	20	0	0	8	5	1	2	2	1	13	0	3	5
45 and Over	16	2	1	7	6	2	4	3	2	11	1	3	7
Total Known	263	11	9	117	73	10	54	31	33	96	45	47	68
Unknown	112	12	3	42	45	12	13	12	10	52	10	22	25
Average Score	2.17	2.54	2.11	2.15	2.16	2.40	2.18	2.19	2.18	2.29	2.04	2.15	2.28
Age Group of Mother													
Under 15	2	0	0	2	0	0	0	0	0	1	1	1	1
15-19	34	3	0	11	11	4	3	3	4	13	1	7	6
20-24	94	2	5	40	27	3	14	9	14	32	21	19	21
25-29	81	4	1	35	24	2	14	13	11	25	14	11	21
30-34	54	3	3	21	16	3	10	6	7	19	8	14	12
35-39	29	3	2	12	6	1	9	4	4	12	5	1	10
40-44	16	1	1	10	5	1	3	2	2	9	0	3	8
45 and Over	1	0	0	0	0	0	0	0	0	1	0	0	0
Total Known	311	16	12	131	89	14	53	37	42	113	50	56	79
Unknown	64	7	0	28	29	8	14	6	1	35	5	13	14
Average Score	2.26	2.31	2.58	2.30	2.23	2.14	2.41	2.30	2.26	2.33	2.22	2.23	2.39
Combined Average Score	4.43	4.85	4.69	4.45	4.39	4.54	4.49	4.49	4.44	4.62	4.26	4.38	4.67

and epilepsy (50 per cent); for father 40 years and over, epilepsy (30 per cent), mental retardation (25 per cent), and cerebral palsy (18.2 per cent); and for fathers 45 years and over, epilepsy (20 per cent), and cerebral palsy (18.2 per cent). The numbers are very small for epilepsy and cerebral palsy, but larger for mental retardation.

The average (mean) age of fathers' could not be calculated because of the open-ended age groups. In an attempt to obtain a single comparative measure of age for each diagnosis, weight values were given to the fathers' age groups, as follows: one for under 25 years; two for 25-34 years; three for 35-44 years; and four for 45 years and over. The average weight value for all fathers was 2.17, with a rather narrow range by diagnosis from 2.04 to 2.54. Based on these values the condition with the oldest fathers at the time of birth of the handicapped child was cerebral palsy. Following this, epilepsy, mental retardation and speech impairment were also somewhat above and apart from the rest of the diagnoses.

The mothers in the total group tended toward younger age brackets than the group of fathers. Of the group, 11.6 per cent were under 20 years; 32.1 per cent were 30 years or over; 14.8 per cent were 35 or over; and 5.4 per cent were 40 or over. The diagnoses with the highest percentage of mothers under 20 years of age were: epilepsy (28.5 per cent), and cerebral palsy (18.7 per cent). The diagnoses with the highest percentage of upper-age mothers were: for mothers 30 years and over, cleft palate (50 per cent), and cerebral palsy (43.7 per cent); for mothers 35 years and over, the same (both 25 per cent); and for mothers 40 years and over, speech impairment (10.1 per cent), mental retardation (8.8 per cent), and cleft palate (8.3 per cent). When the numbers of very young and older age mothers were combined, the highest percentages occurred with epilepsy and cerebral palsy and somewhat less notably with mental retardation as in Table 17 derived from the data on Table 16.

Table 17. Extremes of Ages of Mothers at Birth of Handicapped Children Diagnoses with Highest Percentage Distribution

Age Groups	Per Cent of Total Group	Per Cent of Cerebral Palsy	Per Cent of Epilepsy	Per Cent of Mental Retardation
Under 20 plus 30 and over	43.7	62.4	64.2	49.5
Under 20 plus 35 and over	26.4	43.7	42.7	32.7
Under 20 plus 40 and over	17.0	24.9	35.6	21.2

The mothers' age groups were assigned weighted values as follows: one for under 20 years; two for 20-29 years; three for 30-39 years; and four for 40 years and over. The average weight value

Table 18 Birth Order of Handicapped Children, By Diagnoses

	Number of Children												
Birth Order	Total	Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
Total	375	23	12	159	118	22	67	43	43	148	55	69	93
Known Birth Order	311	15	12	126	99	16	57	36	41	115	47	59	79
Unknown Birth Order	64	8	0	33	19	6	10	7	2	33	8	10	14
1st	118	7	4	40	45	8	13	16	16	41	20	21	28
2nd	89	3	3	46	24	4	14	8	13	28	15	20	25
3rd	48	2	4	17	16	1	14	6	4	22	6	10	7
4th	27	0	1	12	10	1	8	4	4	13	3	6	7
5th	15	1	0	6	2	1	3	0	3	3	3	2	6
6th	7	0	0	1	1	0	1	2	0	5	0	0	4
7th	2	1	0	2	0	1	2	0	0	0	0	0	0
8th	3	1	0	1	0	0	1	0	1	2	0	0	2
9th	1	0	0	0	1	0	0	0	0	0	0	0	0
10th	1	0	0	1	0	0	1	0	0	1	0	0	0
Per Cent 1st	37.9	46.7	33.3	31.7	45.5	50.0	22.8	44.4	39.0	35.6	42.5	35.6	35.4
Per Cent 5th or Over	10.7	20.0	0.0	8.7	4.0	12.5	14.0	5.5	9.7	5.2	6.4	3.3	15.2
Per Cent 1st Plus 5th or Over	48.6	66.7	33.3	40.4	49.5	62.5	36.8	49.9	48.7	40.8	48.9	38.9	50.6
* Average Weighted Score	2.32	2.60	2.17	2.38	2.08	2.19	2.95	2.17	2.27	2.49	2.02	2.12	2.49

* Assigned weights same as birth order number.

for all mothers was 2.26, with a narrow range by diagnosis from 2.23 to 2.58. Based on these values the conditions with the oldest mothers at the time of the birth of the handicapped child were cleft palate, eye difficulty, speech impairment and mental retardation. As noted above, when data for the youngest and oldest mothers were combined (Table 20), cerebral palsy, epilepsy and mental retardation had the highest percentages.

Order of birth

Table 18 gives the data on order of birth of 311 of the 375 diagnosed cases of handicap. The percentage distribution of the total group into first born and other groups of birth order is compared in Table 19 with that of canvassed households without handicapped children. No gross difference was found in percentage distribution or in average weighted scores. (Weight assigned same number as birth order.)

Comparison of the diagnostic groups with each other shows: epilepsy (only 16 cases) with the highest percentage of first born children (50 per cent); cerebral palsy (only 15 cases) with the highest percentage of children born fifth or later in the family (20 per cent); the same two diagnoses with the highest proportion in the combined group of first born and fifth or later; and the same two diagnoses and eye abnormalities with the highest average weighted scores.

Table 19 **Distribution of Birth Order**

Order of Birth in Family	Children in Canvass with No Report of Handicap	Handicapped Children Diagnosed at Clinics
Number with known birth order	585	311
1st child	42.4%	37.9%
2nd or 3rd	43.6%	44.0%
4th or over	14.0%	18.0%
	100%	100%
Average weighted score	2.11	2.32
5th or over	10.0%	10.7%
7th or over	1.5%	2.2%
Birth order not available	352	64

Pregnancy history associated with handicapped children

Gross complications of pregnancy (For definition, see questionnaire)

The social workers and physicians at the clinics questioned the mother of each handicapped child about the course of the pregnancy with that child. It was not possible to obtain information for 100. In the other 275, 54 or 19.6 percent reported a complication in response to the physician's and social worker's question about "how normal the pregnancy was." Table 20 gives the findings for each of the 12 diagnosis. No detectable differences existed with the group.

Length of labor (Table 21)

Respondents were asked whether the labor was of normal length, unusually prolonged or unusually shortened. Among the 375 respondents, the question was answered specifically by 277. Of these, 55 or 20 per cent indicated that the labor had been either prolonged or precipitate. The Table also gives the breakdown by each of the 12 diagnoses, most of which are rather closely distributed around the average of 20 per cent. Two noticeable deviations occurred, but the numbers are small. As high as 47 per cent of the cerebral palsied births were precipitate or abnormally slow. On the other hand, only eight per cent of the labors relative to the birth of children with heart conditions were reported to have been of abnormal length or rapidity.

Birth presentation (Table 22)

Of the 375 cases, the question on birth presentation was answered specifically in 254. Of these, only seven or 2.7 per cent reported other than a cephalic presentation. Although the numbers are too small for conclusions, the data for the 12 diagnoses are given in the Table.

Type of delivery (Table 23)

Attempt was made to obtain information distinguishing spontaneous deliveries from instrumental, Caesarean or other types of non-spontaneous delivery. Of the 375 cases, this question was answered specifically in 267. Of these, 22 or 8.2 per cent reported other than a spontaneous birth; six per cent by instrumental delivery and 1.5 per cent by Caesarean. The Table gives the numbers of types of presentation for each of the 12 diagnoses.

The two diagnosis with the highest percentage of non-spontaneous delivery reported are epilepsy (23 per cent) and cerebral palsy (16.6 per cent). In the last three tables, it is striking to note that, relative to the birth of children with cleft palate or heart conditions, there occurred absence or very low frequency of non-spontaneous delivery, of other than cephalic presentations and of abnormal length of labor. Cleft palate and heart disease are the two of the 12 diagnoses that theoretically have the least possible relationship with the birth process.

Birth weight (Table 24)

Birth weight was reported for 235 of the 375 cases. No attempt was made to verify the reported statements. Although some error undoubtedly exists, mothers do amazingly well in remembering this bit of information, with some tendency to reduce or augment the respective extremes. The failure to obtain any figure in more

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Table 20

Handicapped Children
Complications of Mothers' Pregnancy Reported

Number of Children

Report of Complications	Total	Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
Not Complicated	221	15	9	85	68	11	27	28	28	82	35	46	56
Complicated	54	3	3	28	19	4	6	7	8	23	12	10	15
Information Not Known	100	5	0	46	31	7	34	8	7	43	8	13	22
Total Number Cases	375	23	12	159	118	22	67	43	43	148	55	69	93

Per Cent

Per Cent Complicated Among Those With Known Information	19.6	16.6	25.0	24.7	21.8	26.6	18.2	20.0	22.2	21.9	25.5	17.8	21.1
Per Cent Complications Reported in Total Group	14.4	13.0	25.0	17.6	16.1	18.1	9.0	16.3	18.6	15.4	21.8	14.5	16.1

Table 21

Reported Abnormal Length of Labor at Birth of Handicapped Children

	Number of Children												
	Total	Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
Normal	222	9	10	84	69	9	23	30	35	79	40	44	58
Prolonged	32	6	2	19	11	3	5	3	2	14	8	6	7
Precipitate	23	2	0	10	10	1	4	2	1	12	1	4	9
Total Known	277	17	12	113	90	13	32	35	38	105	49	54	74
Unknown	98	6	0	46	28	9	35	8	5	43	6	15	19
Total	375	23	12	159	118	22	67	43	43	148	55	69	93
(Abnormal = Prolonged + Precipitate)	Per Cent												
Abnormal Per Cent of Known	19.7	47.1	16.7	25.7	23.3	30.8	28.1	14.3	7.9	24.8	18.4	18.5	21.6
Abnormal Per Cent of Total (Known and Unknown)	14.7	34.8	16.7	18.2	17.8	18.2	13.4	11.6	7.0	17.6	16.4	14.5	17.2

Table 22

Birth Presentation of Handicapped Children

Presentation		Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
Cephalic	247	15	12	95	78	11	27	32	36	94	46	45	72
Breech	5	0	0	4	2	0	1	1	0	4	0	2	0
Other	2	0	0	1	2	0	0	0	0	0	0	1	1
Unknown	121	8	0	59	36	11	39	10	7	50	9	21	20
Non-cephalic Per Cent of Known Responses	2.7												
Non-cephalic Per Cent of Total (Known and Unknown)	1.3												

Table 23

Type of Delivery of Handicapped Children

	Number of Children												
Type of Delivery	Total	Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
Normal	245	15	12	96	78	10	27	32	38	90	41	46	70
Instruments	16	3	0	8	7	2	1	2	0	7	4	3	1
Caesarean	4	0	0	1	1	0	1	0	0	3	2	1	2
Other	2	0	0	1	1	1	0	0	0	1	1	1	1
Unknown	108	5	0	53	31	9	38	9	5	47	7	18	19
	Per Cent												
Per Cent of Non-Spontaneous Delivery Among Known Types	8.2	16.6	0	9.4	10.3	23.0	6.9	5.9	0	10.9	14.6	9.8	5.4
Per Cent of Non-Spontaneous Delivery Reported in Total Group	5.8	13.0	0	6.3	7.6	13.6	3.0	4.6	0	7.4	12.7	7.2	4.3

than one-third of the cases probably reflects the occurrence of home deliveries among some of the families. Of the 235 handicapped children with reported birth weight, 13 per cent were said to have been five and one-half pounds or less and therefore defined as premature. Seven per cent were in the heaviest weight group of more than nine and one-half pounds. Table 24 shows the per cent distribution of birth weight groups among the 12 diagnosis. No particular conclusions are drawn from these figures.

Natal and neonatal condition (Table 25)

The respondents were asked whether or not the baby had had unusual difficulties during the first month of life. Answers were obtained from 292 of the 375 children with a handicap. As would be expected, the cleft palate group frequently had feeding problems during the first weeks. The high frequency of reported difficulty among cerebral palsied infants at the very outset of life is interesting, though inconclusive in such small numbers.

History of other pregnancies to mothers of handicapped children

No distinction is here made between pregnancies that preceded and those that followed the birth of the handicapped child.

Number of pregnancies (Table 26)

Information was obtained on the mothers of 290 of the 375 children. These women had had a total of 1,166 pregnancies or an average of four pregnancies each at the time of the interview. This total includes the handicapped child as well as pregnancies that occurred before and after that one. Only 13 per cent had no other pregnancies than that of the handicapped child. Twenty-seven per cent had had six or more pregnancies.

No conclusions can be drawn regarding the questions: (1) Do congenital types of handicap occur more often in a family merely in relation to the number of children born?; (2) How does the presence of a handicapped child affect the ultimate size of the family?; (3) Do different types of handicap have different effects on family size?

Number of premature onsets of labor (Table 27)

Of the 375 handicapped children, information was obtained for 285 on the total number of times their mothers had had premature deliveries among all their pregnancies up to the time of interview. Of these, 17.5 per cent reported at least one premature infant. This is not grossly different from the general expectation of cumulative experience among women of this age group.

No conclusions can be drawn on the differences between the diagnostic conditions.

Number of "miscarriages"

Of the 375 mothers of handicapped children, information on interruptions of pregnancy that are usually known as "miscarriages" was obtained for 290. Practically all of these mothers (98.6 per cent) had had at least one miscariage. This held true for each one of the 12 diagnostic conditions. The average number of miscarriages reported for the 290 women was 1.37, with little variation among the 12 conditions.

Number of dead children—Number of children who were born alive and died, to the mothers of handicapped children

Of the 375 handicapped children, information of deaths among all children born alive to their mothers was obtained for 288. Of these, 46 mothers had lost at least one child after birth, a rate of 16 per cent. A total of 58 children had been lost, an average of 0.2 children per mother among the 288. No conclusions are drawn on differences among the 12 diagnostic conditions.

Combined number of miscarriages and dead children (Table 28)

Losses of children, both stillborn and live-born, by mothers of handicapped children are presented in this Table.

Socio-economic factors

Race

A number of errors could have entered into the effort to separate the data for whites and negroes.

The sampling of households might have favored one or the other race. The composition of the sampled households indicates no gross discrepancies. Thirty-one and three-tenths (31.3) per cent of the canvass group were negro compared with 27 per cent estimated in the two counties of the study (14,659 in total population of 54,291).

When interviewed, the negro and white respondents might have had different levels of accuracy or completeness in their responses to the questions. An indirect clue to this response was available from an analysis of the actual confirmed diagnoses that were found at the clinics. The negro respondents showed a greater amount of "over-reporting" as evidenced by failure of confirmation of presumptive diagnoses. Among the 128 white children seen at the clinic from the canvass sample, 72.4 per cent were found to have at least one of the 12 diagnoses, compared with 52.9 per cent among the 51 negro children seen from the canvass sample. The same degree of difference in accuracy of reporting existed in respect to the specificity of the responses. Among these white children, 114 presumptive diagnoses were specifically confirmed 54.4 per cent of the time compared with only 39.7 per cent of specific confirmation among 63 presumptive diagnoses in these negro children. (Table 29)

No estimate can be made of the amount of "under-reporting"

Table 24 REPORTED BIRTH WEIGHTS OF HANDICAPPED CHILDREN

All Children Diagnosed as Handicapped at Clinics

BIRTH WEIGHTS	TOTAL		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 3 lb. 9 oz.	9	13.6	2	26.7	1	36.4	4	16.5	5	16.9	1	16.7
3 lb. 9 oz. - 4 lb. 8 oz.	2		0		0		0		0		0	
4 lb. 9 oz. - 5 lb. 8 oz.	21		2		3		12		7		1	
5 lb. 9 oz. - 6 lb. 8 oz.	34	79.2	1	66.7	1	63.6	13	76.3	8	74.7	1	83.3
6 lb. 9 oz. - 7 lb. 8 oz.	68		5		5		23		21		2	
7 lb. 9 oz. - 8 lb. 8 oz.	57		3		1		30		14		3	
8 lb. 9 oz. - 9 lb. 8 oz.	27		1		0		8		10		4	
9 lb. 9 oz. -10 lb. 8 oz.	11	7.2	1	6.7	0		3	7.2	3	8.4	0	
More than 10 lb. 8 oz.	6		0		0		4		3		0	
Known total	235	100.	15	100.	11	100.	97	100.	71	100.	12	100.
Unknown	140		8		1		62		47		10	

Table 24 Continued

BIRTH WEIGHTS	Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 3 lb. 9 oz.	3	16.0	1	20.7	1	13.2	4	18.1	2	18.6	1	10.6	4	18.3
3 lb. 9 oz. - 4 lb. 8 oz.	0		0		1		1		1		0		0	
4 lb. 9 oz. - 5 lb. 8 oz.	1		5		3		10		5		4		7	
5 lb. 9 oz. - 6 lb. 8 oz.	2	76.0	4	72.4	9	76.3	13	73.5	3	76.8	7	80.9	6	75.0
6 lb. 9 oz. - 7 lb. 8 oz.	8		4		8		21		15		13		19	
7 lb. 9 oz. - 8 lb. 8 oz.	6		10		7		19		13		15		14	
8 lb. 9 oz. - 9 lb. 8 oz.	1		3		5		8		2		3		6	
9 lb. 9 oz. -10 lb. 8 oz.	2	8.0	2	6.9	4	10.5	4	8.4	2	4.6	2	8.5	3	6.7
More than 10 lb. 8 oz.	0		0		0		3		0		2		1	
Known total	25	100.	29	100.	38	100.	83	100.	43	100.	47	100.	60	100.
Unknown	42		14		5		65		12		22		33	

Table 25

REPORTED UNUSUAL DIFFICULTIES DURING NEONATAL PERIOD

All Children Diagnosed as Handicapped at Clinics

Unusual Difficulties Reported	Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	53	18.2	8	38.1	5	41.7	28	23.0	21	23.1	3	17.6
No	239	81.8	13	61.9	7	58.3	94	77.0	70	76.9	14	82.4
Known total	292	100.	21	100.	12	100.	122	100.	91	100.	17	100.
Unknown	83		2		0		37		27		5	

Table 25 Continued

Unusual Difficulties Reported	Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	7	17.9	6	17.1	7	18.4	31	27.9	8	16.3	13	22.8	20	26.7
No	32	82.1	29	82.9	31	81.6	80	72.1	41	83.7	44	77.2	55	73.3
Known total	39	100.	35	100.	38	100.	111	100.	49	100.	57	100.	75	100.
Unknown	28		8		5		37		6		12		18	

Table 26

NUMBER OF PREGNANCIES OF MOTHERS OF HANDICAPPED CHILDREN

All Children Diagnosed as Handicapped at Clinics

Number of Pregnancies	Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	38	32.7	4	35.0	1	18.2	14	30.6	14	32.2	3	20.0
2	57		3		1		24		15		0	
3	58	40.1	5	40.0	1	45.5	31	43.6	12	38.9	2	46.7
4	29		2		1		13		11		2	
5	29		1		3		10		12		3	
6	21	27.2	1	25.0	1	36.3	6	25.8	9	28.9	2	33.3
7	11		0		1		2		5		1	
8 or more	47		4		2		24		12		2	
Known number of mothers	290	100.	20	100.	11	100.	124	100.	90	100.	15	100.
Unknown	85		3		1		35		28		7	
Total number of pregnancies	1166		76		54		499		369		67	
Average number of pregnancies	4.0		3.8		4.9		4.0		4.1		4.5	

Table Table 26 Continued

Number of Pregnancies	Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1 2	4 7	29.7	3 9	32.4	4 7	29.7	15 15	26.8	8 6	28.6	8 14	36.1	6 11	23.9
3 4 5	5 2 6	35.2	11 5 3	51.4	11 5 3	51.4	17 8 11	32.1	17 4 6	55.1	14 6 5	41.0	15 5 5	35.3
6 7 8 or more	1 0 12	35.1	2 0 4	16.2	2 1 4	18.9	14 6 26	41.1	3 2 3	16.3	3 1 10	22.9	9 6 14	40.8
Known number of mothers	37	100.	37	100.	37	100.	112	100.	49	100.	61	100.	71	100.
Unknown	30		6		6		36		6		8		22	
Total number of pregnancies	173		133		137		517		173		232		326	
Average number of pregnancies	4.7		3.6		3.7		4.6		3.5		3.8		4.6	

Table 27

NUMBER OF PREMATURE DELIVERIES OF MOTHERS OF HANDICAPPED CHILDREN

All Children Diagnosed as Handicapped at Clinics

Number of Premature Deliveries	Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	235	82.5	14	73.7	10	100.	98	83.1	67	77.0	13	92.9
1	41	17.5	3	26.3	0	0	16	16.9	15	23.0	0	7.1
2	7		1		0		3		4		0	
3	1		0		0		0		1		0	
4 or more	1		1		0		1		0		1	
Known number of mothers	285	100.	19	100.	10	100.	118	100.	87	100.	14	100.
Unknown	90		4		2		41		31		8	
Total number of premature deliveries	62		9		0		26		26		4	
Average number of premature deliveries	0.2		0.5		0.0		0.2		0.3		0.3	

Table 27 Continued

9.

Number of Premature Deliveries	Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	26	70.3	33	89.2	30	81.1	90	81.1	35	71.4	49	84.5	60	85.7
1	9	29.7	3	10.8	5	18.9	16	18.9	14	28.6	8	15.5	7	14.3
2	2		0		2		3		0		1		3	
3	0		1		0		1		0		0		0	
4 or more	0		0		0		1		0		0		0	
Known number of mothers	37	100.	37	100.	37	100.	111	100.	49	100.	58	100.	70	100.
Unknown	30		6		6		37		6		11		23	
Total number of premature deliveries	13		6		9		29		14		10		13	
Average number of premature deliveries	0.4		0.2		0.2		0.3		0.3		0.2		0.2	

Table 28 Combined Number of Miscarriages and Children Born Alive but Subsequently Died

Born to 190 Mothers

	Number of Miscarriages and Deaths	Number of Mothers	Average Number per Mother
Cerebral palsy	29	19	1.53
Cleft palate	18	12	1.50
Cosmetic	186	121	1.54
Emotional disturbance	160	90	1.78
Epilepsy	19	14	1.36
Eye	65	37	1.76
Hearing	67	39	1.72
Heart	59	37	1.59
Mental retardation	196	112	1.75
Orthodontic	69	50	1.38
Orthopedic	83	59	1.41
Speech	131	72	1.82

Table 29

Reliability of Presumptive Diagnoses - By Race

Canvass Cases Seen at Clinic

Presumptive Diagnoses	White			Negro		
	Number of Presumptive Diagnoses	Per Cent With Same Final Diagnoses	Per Cent With Any Final Diagnoses	Number of Presumptive Diagnoses	Per Cent With Same Final Diagnoses	Per Cent With Any Final Diagnoses
Cleft Palate	1	100	100	-	-	-
Cosmetic	6	50	67	2	00	00
Emotional Disturbance	4	75	100	2	00	50
Epilepsy	3	00	67	3	67	67
Eye	28	46	64	14	21	29
Hearing	19	37	63	13	23	69
Heart	8	75	100	7	29	57
Mental Retardation	8	88	100	2	100	100
Orthodontic	10	90	100	1	100	100
Orthopedic and Cerebral Palsy	10	60	67	5	100	100
Speech	17	47	69	14	50	71
	114	54.4	72.4	63	39.7	52.9
	(different children)			(51 different children)		

that occurred in either racial group, since it was not possible to examine a sample of the canvass household children about whom the respondents gave no abnormal reports.

It is reasonable to assume that non-white respondents showed greater inaccuracy than the white respondents in respect to under-reporting, just as they did in over-reporting. This may be the chief reason for the lower general prevalence of handicap among negro children.

It is conceivable that the patterns of responses caused the pediatrician who reviewed them to make certain presumptive diagnoses more often for one group of respondents than another. There is no way of checking this possibility. The pediatrician, however, had no information concerning the race of the respondents when he checked the questionnaires.

An additional artifact could have been introduced by a difference between the races in completeness of attendance at the clinics after invitation. Sixty-nine and one-tenth (69.1) per cent of the invited white children attended, compared with 85 per cent of the non-white. It is true that adjustment for non-attendance was made in the analysis of the clinic findings. It must be repeated, however, that the method of adjustment could not avoid the necessity of assuming similarity between the attenders and the absentees.

It is not improbable that the professional staffs of the diagnostic clinics placed different interpretations on findings among white and negro children. For example, an orthodontic condition in a negro child could have been looked at as reasonably "normal" rather than sufficiently disfiguring to rate being labeled as a cosmetic handicap. Similarly, unclear speech in a negro child might at times be considered to be part of the "dialect." At other times, a dialectal pronunciation might be called defective speech by a white professional worker. As a matter of fact, speech handicap was diagnosed more than twice as frequently among colored children. Such distinctions add elements to the difficult decision of what makes a disability a handicap in a given child at a specific stage in his growth under the circumstances of his living and growing. A restraining feature, however, on complete acceptance of such an interpretation rests in the realization that the negro respondents, by their "over-reporting," did seem to consider their children "abnormal." In contrast, among the children who were reported voluntarily (Table 30) by school teachers and others (largely by professional persons), the negro children showed no greater amount of "over-reporting" than did the white children: 76 per cent and 81 per cent respectively revealed a handicap when examined and 61 per cent and 62 per cent respectively revealed the same handicap as the presumptive diagnosis. This simi-

Table 30 Reliability of Presumptive Diagnoses - By Race

Voluntarily Reported Cases Seen at Clinic

Presumptive Diagnoses	White			Negro		
	Number of Presumptive Diagnoses	Per Cent With Same Final Diagnoses	Per Cent With Any Final Diagnoses	Number of Presumptive Diagnoses	Per Cent With Same Final Diagnoses	Per Cent With Any Final Diagnoses
Cerebral Palsy	8	38	88	7	86	100
Cleft Palate	9	67	100	3	67	100
Cosmetic	14	79	93	9	78	89
Emotional Disturbance	18	83	89	4	50	100
Epilepsy	15	93	93	3	67	67
Eye	99	44	58	25	24	68
Hearing	43	44	63	6	50	80
Heart	36	75	86	10	40	50
Mental Retardation	43	79	93	20	80	90
Orthodontic	10	70	80	5	60	60
Orthopedic	33	73	97	34	82	91
Speech	35	49	83	23	61	91
Total	363	61	76	149	62	81

larity, however, did not carry through among the separate diagnoses. In voluntary reporting, "over-reporting" of negro children appreciably exceeded that for white children for presumptive diagnoses of eye and heart, orthodontic and personality conditions; over-reporting was greater for white children for cerebral palsy and orthopedic conditions. In the canvass group (self-reporting), "over-reporting" of negro children appreciably exceeded that for white children for presumptive eye, hearing and heart conditions; again, there was more over-reporting for white children for othopedic conditions and cerebral palsy.

Added to the above reservations is the problem of the small number of children from the canvass who were seen at the clinics—56 white and 27 non-white. Tables 31 and tables of absolute numbers from which these adjustments were made give full data on these. The gross totals of all conditions combined are probably more reliable than the estimates for each one of the diagnoses, especially those diagnoses with very few children. A higher rate of handicap was found among the white children in the community than among the negro children; 102.7 per thousand and 76.1 per thousand respectively. Among the diagnostic conditions which were found in any numbers of canvass cases in both racial groups, speech impairment occurred more frequently among negro children, whereas eye and cosmetic conditions were found more often among white children. Based on still smaller numbers, the existence of orthodontic and personality disorders was identified more often in white children, but cerebral palsy more frequently in negro children. See Table 31.

Urban-rural residence

The residence areas of the two counties of the study were classified into five groups, as follows:

Urban — Athens
Rural — Towns in Clarke County
— Open areas in Clarke County
— Town in Oconee County
— Open areas in Oconee County

Since all were, in effect, rural except for the city of Athens, the data was compressed into two groups, Athens as urban and the remainder rural.

As seen on Table 36, 43 per cent of the handicapped children so diagnosed at the clinics were of urban residence. This includes both the voluntarily reported and the canvass cases. In comparisson, 59 per cent of the 1,373 persons under 21 living in canvassed households in the two counties were in Athens.

Obviously, the two sets of data apply to different populations. It is interesting to note, however, that the non-urban areas produced

Table 31

Handicapped Children - By Race

Canvass Cases

	White		Negro	
	Number of Diagnoses Made	Estimated Rate of Handicapped Per 1000 Children	Number of Diagnoses Made	Estimated Rate of Handicapped Per 1000 Children
Cerebral Palsy	1	1.7	4	11.5
Cleft Palate	1	1.4	-	-
Cosmetic	28	50.7	7	18.8
Emotional Disturbance	13	23.6	9	25.7
Epilepsy	-	-	3	9.7
Eye	15	26.0	5	13.0
Hearing	8	16.2	6	17.8
Heart	6	11.0	2	5.4
Mental Retardation	19	34.9	12	34.9
Orthodontic	11	21.4	3	8.0
Orthopedic	6	13.2	4	11.1
Speech	9	17.1	15	43.0
Total	117	102.7	70	76.1
	Average - 2.1 Diagnoses Per Handicapped Child	56 Different Children	Average - 2.6 Diagnoses Per Handicapped Child	27 Different Children

Table 32

Occupation of Head of the Family
All Handicapped Children Diagnosed at Clinic

	Occupation of Head	Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disburbance		Epilepsy		Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
	Grand Total	375		23		12		159		118		22		67		43		43		148		55		69		93	
	Total Classified	320	100	19	100	11	100	132	100	102	100	16	100	56	100	37	100	35	100	128	100	45	100	60	100	79	100
"Unskilled"	Farmers and Farm Managers	71		2		1		28		15		2		12		11		5		37		6		15		20	
	Private Household Workers and Housewives	34		5		2		17		7		3		3		4		4		16		4		11		7	
	Farm Laborers and Foremen	3		1		0		0		2		0		1		0		0		3		0		2		1	
	Other Laborers	26		2		0		8		9		0		1		2		1		19		0		3		12	
	Total	134	41.9	10	53	3	27	53	40	33	32	5	31	17	30	17	46	10	28	75	58	10	22	31	52	40	51
"Skilled and Semi-Skilled"	Clerical and Kindred Workers	10		1		0		8		1		0		4		0		0		0		5		3		0	
	Sales Workers	19		1		2		10		7		2		5		2		3		5		3		3		3	
	Craftsmen, Foremen	38		2		1		19		14		3		11		5		3		12		7		5		7	
	Operatives, Plumbers Painters, Mechanics	60		4		5		15		26		4		7		9		10		25		12		5		20	
	Service Workers except Private Household	19		1		0		10		8		2		3		1		1		7		1		5		2	
	Total	146	45.6	9	47	8	73	62	47	56	55	11	69	30	54	17	46	17	49	49	38	28	62	21	35	32	40
"Prof-Execu."	Professional and Technical	19		0		0		13		4		0		7		0		4		3		4		4		2	
	Managers, Officials, Proprietors	21		0		0		4		9		0		2		3		4		1		3		4		5	
	Total	40	12.5	0	0	0	0	17	13	13	12	0	0	9	16	3	8	8	23	4	4	7	16	9	13	7	9
	Not stated or unable to classify	55		4		1		27		16		6		11		6		8		20		10		9		14	
	Mean weighted scores*		1.71		1.47		1.72		1.68		1.80		1.69		1.86		1.62		1.77		1.47		1.93		1.61		1.58

*Weight assignments
1 = "Unskilled"
2 = "Skilled and Semi-skilled"
3 = "Professional and Executive"

Table 33

Occupation of Head of Family

Canvass Households Without Reported Handicap

Occupation of Head of Family	# Children under 21	%	
"Unskilled"	226	19.2	35.6
	116	9.8	
	8	0.6	
	68	5.7	
"Skilled and semi-skilled"	18	1.5	47.0
	55	4.6	
	159	13.5	
	187	15.9	
	133	11.3	
"Professional and executive"	119	10.1	17.3
	84	7.1	
Total	1173	100.0	
Not stated or unable to classify	200		
Mean weighted score*	1.81		

*Weight assignments
1 = "Unskilled"
2 = "Skilled and semi-skilled"
3 = "Professional and executive"

Table 34

Occupation of Head of Family

All Canvass Families, with and without Handicaps

Occupation of Head of Family	Number of Families	%
"Unskilled"	276	35.1
"Skilled and semi-skilled"	350	44.5
"Professional and executive"	160	20.3
Information available	786	100%
Not stated or unable to classify	215	___
Total	1001	___

Table 35

Room Occupancy

Average Number of Persons per Room	Canvass Homes No Handicap Reported			Homes of All Handicapped Children Diagnosed at Clinic																									
	Number Families	Per cent		Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy		Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
				#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
< 1	429	31.5		92	27.0	5	25.0	2	16.7	32	22.7	25	22.9	4	21.1	17	29.3	10	24.4	14	37.8	22	15.7	15	31.2	14	21.2	16	18.2
1.0-1.4	495	36.4		109	32.0	6	30.0	4	33.3	53	37.6	38	34.9	7	36.8	21	36.2	15	36.6	11	29.7	38	27.1	25	52.1	25	37.9	19	21.6
1.5-1.9	175	12.8	32.1	54	41.0	3	45.0	4	50.0	23	39.7	22	42.2	2	42.1	9	34.5	7	39.0	4	32.4	31	57.1	3	16.7	11	40.9	18	60.2
2.0-2.4	170	12.5		49		1		2		16		15		2		5		8		5		28		1		12		19	
2.5 & >	92	6.8		37		5				17		9		4		6		1		3		21		4		4		16	
Un-known	12			34		3				18		9		3		9		2		6		8		7		3		5	
Total	1373			375		23		12		159		118		22		67		43		43		48				69		93	
Average Weighted Scores*	1.63			1.75		1.90		1.75		1.76		1.74		1.84		1.65		1.66		1.59		1.96		1.52		1.74		1.99	

* > 1 = 1
1.0 - 1.4 = 1.5
1.5 - 1.9 = 2.0
2.0 - 2.4 = 2.5
2.5 & = 3.0
} *assigned weightings

Table 36 -

Urban - Rural Residence of Children with Final Diagnoses
All Children Seen at Clinic *

	Diagnoses																									
	Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy		Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Urban	160	43	11	50	6	50	73	50	60	53	10	50	23	40	10	24	21	57	64	45	28	57	33	50	35	40
Rural	187	57	11	50	6	50	72	50	52	47	10	50	36	60	32	76	16	43	78	55	21	43	33	50	53	60

* Urban - Rural residence not certain in 28 cases.

a disproportionately high number of all the handicaps. As shown by the diagnostic breakdown in Table 36, this disproportion is produced largely by the four conditions which composed the great number of school referrals—speech, hearing, vision and mental retardation. In contrast, the urban area had a higher proportion of diagnosed cases among the "sophisticated" conditions—orthodontic, heart and emotional disturbances. No doubt exists of the interrelatedness of urban-rural residence with economic level, education and race. The numbers of cases are too few for separate analysis of these factors.

Status of parents in the home (Table 37)

Among the 375 handicapped children diagnosed at the clinic, the status of parents in the home was obtained for 364. Seventy-four per cent of these had the "most favorable" status of two natural parents in the home. It is probable that this is an over-statement of the desirable situation, since the less normal ones would be expected to lead to a lower proportion of clinic attendance. No information for comparison was available concerning the homes of children who did not attend or of the general population in the community. It is interesting to note that the three conditions which had the lowest percentage of favorable parental status in the homes were cerebral palsy, epilepsy and emotional disturbance. No conclusions are here drawn as to possible cause and effect relationships.

Home ownership (Table 38)

Among the families of the 375 handicapped children so diagnosed at the clinic, the status of home ownership was ascertained in 329. Forty-one per cent of these owned their own home. This is almost exactly the same percentage as that of the canvass families that reported no abnormal conditions among their children. The figure for the community at large was not obtainued in comparable terms. Although similarity between families with and without a handicapped child exist in total proportions of home owners, interesting differences did appear among the twelve diagnoses of handicap. Lowest frequency of home ownership occurred in association with mental retardation, epilepsy and cerebral palsy.

Room occupancy (Table 35)

Information on room occupancy was obtained on families of 341 of the 375 children found to have a handicap at the clinic. In this group, 27 per cent reported an average of less than one person per room, which would usually fall in the upper income bracket; 32 per cent had between one and 1.4 persons per room, which would be reasonable; 41 per cent had one and a half or more persons, which would tend toward a crowded condition. Included in the last group were 25.3 per cent of the total number of families that had

Table 37

Status of Parents in the Home -- All Handicapped Children Diagnosed at Clinic

Status of Parents in the Home	Total		Cerebral Palsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy		Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Both Parents in Home	269	74	12	55	8	67	115	75	73	63	13	62	55	85	31	74	34	79	97	67	42	79	46	69	65	71
Father only	10		2		1		7		6				2		1				4		4		3		5	
Mother only	49		5		3		22		19		5		5		4		7		21		6		9		12	
A Stepfather	5								3								1		2				1		1	
A Stepmother	1								1																1	
Cared for by other relative	24		2				9		10		2		2		6				18		1		8		6	
Foster Home	6		1				1		4		1		1				1		2						2	
Unknown	11		1				5		2		1		2		1				4		2		2		1	
	375																									

Table 38

Home Ownership

Home Owner-ship Status	Canvass Homes No Handicap Reported		Families of All Handicapped Children Diagnosed at Clinic																									
			Total		[illegible]rebral [illegible]alsy		Cleft Palate		Cosmetic		Emotional Disturbance		Epilepsy		Eye		Hearing		Heart		Mental Retardation		Orthodontic		Orthopedic		Speech	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Own Home	569	42	134	41	6	30	4	40	52	39	38	36	5	28	24	42	18	46	20	54	37	27	25	54	33	53	29	35
Rent	787		195		14		6		83		68		13		33		21		17		99		21		29		55	
Other or Un-stated	17		46		3		2		24		12		4		10		4		6		12		9		7		9	
Total	1373		375		23		12		159		118		22		67		43		43		148		55		69		93	

two or more persons per room, which is definitely in the crowded category.

When room occupancy was tabulated by separate diagnoses, the following seemed worthy of note. In the low occupancy class of less than one person per room, personality disturbance was most frequent. Rather than assuming a higher prevalence, it is possible that this condition was reported more often from the upper income group. In the crowding category of one and a half or more persons per room, speech impairment and mental retardation were highest.

When a rating was attempted by weighted scores—the weighting as indicated in the Table 35—the average score for the total group was 1.75. The three highest conditions, (most crowding) which were definitely above the others, were speech impairment, mental retardation and cerebral palsy. The two lowest were heart disease and orthodontic conditions. It is interesting to speculate that in the higher economic groups, and this seems to be borne out by some of the other data, heart conditions occur or are recognized more frequently, and that orthodontic conditions either occur more frequently because of poorer teeth or become a concern of the parents more often.

Possibly offering some measure of comparison are data on room occupancy of families presumably without a handicapped child. Information was obtained on 1,361 of the 1,373 canvass families. Thirty-one and a half per cent reported less than one person per room equivalent to an upper income group; 36.4 per cent were in the intermediate group of one to 1.4 persons per room; the remainder, 32 per cent, were in the more crowded occupancy of one and a half or more persons. Within the last, 19.3 per cent of the total canvass families without reported handicap were in the still more crowded category of two or more persons per room. There is no significant difference in the occupancy distribution of the total group of these families without a reported handicap as compared with the families of children with handicaps. When the same weighted score method of rating was used, the average for this entire group was 1.63 as compared with 1.75 in the group with handicaps. It is interesting that all but two of the individual diagnostic groups had a score that was higher than the occupancy score of this group of families without handicaps.

Occupation of the head of the family

Table 32 gives data on occupation of heads of families of 320 of the handicapped children diagnosed at the clinic. Comparison with information obtained from the canvass on families from which no presumed handicaps were reported shows a trend to lower occupational levels in families with handicaps. (Table 33) When weighted scores were derived for each of the handicapping conditions, the rank order among the conditions deserves com-

Table 39

Education of the Head of the Family

All Households

Education of Head of Family	Handicap not reported at canvass			Handicaps found at clinic		
	Number		Percent	Number		Percent
No formal education	28	636	48.6	28	208	64.2
Grade school or less	608			180		
Some high school, not graduated	259	404	30.9	46	70	21.6
High school graduation	145			24		
Beyond high school, not graduated	127	269	20.5	20	46	14.2
College degree or higher	142			26		
Total	1309		100.0	324		100.0
Not stated or unknown	64		——	51		——

ment. Orthodontic, eye and emotional conditions seemed to occur more frequently in families with the higher brackets of occupation of family head, suggesting that such people may be more discerning with respect to these types of conditions. At the other end of the scale, mental retardation and cerebral palsy had the two lowest mean weighted scores.

Education of the head of the family

The father was most commonly identified as the head of the family. Table 39 shows an inverse association between the presence of a handicapped child in the family and the amount of educational achievement of the family head.

CHAPTER IV

Study of Community Resources

One of the two major purposes of the study was to survey the existing resources of the state in terms of their distribution and availability to handicapped children and their families. Any attempt at appraisal of adequacy of services must necessarily match what exists against some kind of a standard. In the absence of any formalized standards, the study first devoted itself to establishing what were called "Community Blueprints." A blueprint was a listing of all types of services that would be required in appreciable amounts by a group of children with any given handicapping condition. In a sense it would be an Utopian or ideal community if all categories of needed service were available. The director of the study drafted twelve blueprints, one for each of the diagnostic conditions covered by the survey. A separate committee for each diagnosis was set up. The committees were multi-disciplinary. They reviewed the material, criticized and suggested changes. The final drafts of the twelve blueprints (Appendix V) were then combined into a single composite Community Blueprint of services for handicapped children, regardless of diagnosis (Appendix W). This was done so that the analysis of communities would be in functional terms of services to children rather than being compartmentalized by diagnostic categories. For example, speech therapy was regarded as a single community resource rather than necessarily separated for diagnostic groups. At the same time, the actual availability of speech therapy to children with cerebral palsy, cleft palate or functional speech disturbances was also considered.

Community Blueprint for Community Study

The composite blueprint was designed as a guide for community committees to use in evaluating the resources for handicapped children available in their own districts. It constituted a guide for this purpose in a number of ways. Column I listed the desirable components of total rehabilitation.

Case Finding: No attempt was made to obtain information on case-finding methods or effectiveness. This item on the blueprint was merely used as an educational device to emphasize the importance of early and comprehensive case finding. Finding a child is not the whole story. Even if a handicapped child is known to agencies, exposing gaps in his rehabilitation constitutes another important phase of case finding.

Registration: In the briefing of the self-evaluation committees, it was made clear that registration was not being urged as an essential practice in all communities for all types of handicapped children. The item was included in the event that rosters of children were available from one or another source, and also to point up the uses to which listings can be put for purposes of better service as well as administration and planning. Practical difficulties in maintaining current and effective registers were described.

Diagnosis and Recommendation for Care: Here emphasis was placed upon the complex and varied problems encountered in making a comprehensive appraisal of the status and needs of a handicapped child. Diagnosis was expressed as transcending a medical examination alone, but including the special skills of other disciplines, such as in the assessment of deviations in intelligence and behavior. The second feature that was emphasized in item 3 was the desirability of the multi-disciplinary approach being attained by the team process rather than by simple addition of completely independent appraisals. The third emphasis was on the function of the diagnostic process as not being an end point but a beginning. It is the basis for further planning so that the future management of the child will not depend upon hit or miss, day to day decisions. Instead, there should be a comprehensive plan which includes the physical, mental, emotional, social, educational and vocational aspects of rehabilitation, which has both short-term and long-term objectives, and which strikes a balance between conforming to the plan and deviating flexibly from it as occasion for change arises.

General Health Supervision: The handicapped child, like other children, deserves to have his general health protected by on-going, reasonably continuous health supervision, both in relation to and without regard to his handicap. Such health supervision should include both medical and dental components.

Special Health Care: After a diagnosis and plan of care have been established, the special medical and related services that are indicated need to be made available to the child who lives at home with his family. Services here would include medical and dental treatment, special therapies, prosthetic devices and home nursing care.

Much difference of opinion exists on the most effective, the most frequently used, and best method of the several special therapies. For example, should a child receive treatments by a physical therapist five days a week or one day a week; or should the physical therapist act as a supervisor, teacher and consultant to the mother or other person who would actually do the therapy. Obviously, there is no single answer to this question that will fit all patients' needs or all situations. It is important, however, to recognize the broad range of possible approaches that does exist, not only because one method may be preferable to another in certain cases but also because of the realistic need to economize in funds and scarce professional time. It is for this reason that physical therapy, occupational therapy and speech training were each divided into two sub-catagories of direct and indirect approach. Arbitrarily, the direct approach was defined as a frequency of one or more times per week.

Items 5, 6, 7, 8, and 9, speech reading, hearing discrimination and language development, were listed separately for reasons of emphasis. Item 10, on orthoptic training was phrased to encompass direct office treatment as well as adequately supervised home exercise. Item D, prostheses, was described as more than the purchase of a gadget over a store counter. Item E, home nursing service, not necessarily at the Registered Nurse level, was listed in full realization of the widespread difficulty of obtaining such service, and to call attention to the fact that a relatively small amount of home nursing care can make the difference that brings adjustment to self, home and community within the realm of possibility. It was interesting to note how often the professional personnel in the clinics that were set up in Clarke and Oconee Counties expressed the need for home nursing service.

Hospital or Institutional Care: Items A and B, hospital care were meant to be short-term care to correct a temporary situation, to stabilize a regimen, or to help ready the child for another placement such as a special day class. Item C, convalescent institutional care, was also intended for relatively short-term stay; somewhat between the function of the hospital and long-term institutional or home care. An arbitrary period of approximately six months was used to distinguish convalescent care from long-term institutional care. In some instances, this period was exceeded slightly. Item D, long-term institutional care, signified that a child had to be removed from the community for a period of years or for life. Hopefully, the function of an institution is not that of compensating for community inadequacies in handling handicapped children who belong at home or in society, but rather that of meeting to a reasonable degree the needs of children who, under the best of circumstances, are not suitable candidates for a place in a family or in a community. Item E, detention homes, was included, not for any special need of handicapped children, but to point up the desirability of having such a facility for emergency short-term placement of children, handicapped or not, who find themselves temporarily without a home. Item F, foster home care, was included for a different reason. When certain services for handicapped children cannot be brought to the smaller or rural communities, it may be necessary to place a child temporarily away from his home during a period of specialized care.

Education: This was divided into five subdivisions. A and B were the two groups that would permit the handicapped child to live at home while attending school each day. Hopefully, the goal for the handicapped child would be admission to regular classes. On the other hand, to the extent that he needs and can profit from modification of the regular educational program in special units, either part of the day or for the entire school day, such adjustment should be made available to him. The two goals of regularizing his education on the one hand and specializing it as needed on the other tend to pull in opposite directions. Aiming at a balance between them on the basis of what is best for the child rather than the convenience of the school system should be the criterion for the decision in each individual case.

Item C, home instruction, is listed as an important though not always appropriate service. Too often, a teacher is sent into the home of a child in need of special education as an easier way out for the school system than setting up appropriate special facilities and programs within the school and arranging for the child to be brought to the school. For a residue of homebound children the coming of the teacher is an event that helps to tie the child to the outside world. Newer techniques of telephones, radio and television contact between home and school broaden the potential educational vista of these unfortunately restricted children.

Item D, education for children in hospitals, gives recognition to the value of attaining as much continuity as possible in the child's education during periods of prolonged hospitalization. Here, hopefully, the continuity would be attained not merely by an appropriate amount and level of teaching, but by a relationship, if possible, in technical and administrative supervision between the hospital teacher and the community school system or the one which the child usually attends.

Item E, residential school, includes a short parenthetical statement, "temporary, not full agreement on need," that has two important implications. First is the point of view that a child's being placed in a residential school does not mean that he has to stay there for the rest of his education. Also, an attempt was made to re-emphasize to the evaluating committees that the listing of a service does not always imply that that service is the first choice or the most desirable one for all children or for any particular group of children. A distinction, of course, is made between the residential school and item 6, D, previously described, long-term institutional care. The point of view is advanced that home and community education do have a place in the rearing and education of deaf and blind children as well as the hard-of-hearing and the partially sighted. Residential education for cerebral palsied and emotionally disturbed children introduces a number of different problems.

Guidance, Recreation and Employment: This item combines a number of services that are often entirely separate one from the other, but all of which involve an element of guidance, whether it be personal guidance, parental counseling, help in adjusting to recreation, or vocational aid. Item A, recreation, was considered a resource for handicapped children in the community only if an organized effort existed and was effective for helping them to obtain recreation, either in specialized programs or by absorbing them into general activities. Item B, vocational guidance, had three elements, as parenthetically indicated — counseling, training, and job placement. Item C, employment, was again considered a resource for handicapped children in any community only if there was an organized and effective effort to create protected employment or to absorb handicapped persons into general industry.

Items D and E, guidance, counseling and social work, grouped together any of the mental health professional activities, whether through psychiatry, psychology, social work or other related method. The services are divided into direct and indirect or consultative, similar to the various special therapies as described above.

Item F, parent education program, was considered present in a community only if there was a specific program, not merely if a certain amount of parent education happened to occur as an incidental part of other activities.

Public Education, Prevention, Professional Training and Research: Four activities are here listed to round out the picture of the total community effort, but the self-evaluation committees were not asked to respond concerning the existence or availability of these services.

Other Services: This was added to permit any group to insert activities for which they did not find an appropriate place under the other heading.

Column II, on Possible and Actual Resources, lists for the guidance of the evaluating committees possible directions in which one might turn to find a service in the community. This did not preclude the committee's uncovering a resource under a different type of auspice, nor on the other hand did it imply that every one of the possible resources listed is essential. Most communities would be hard put, for example, to find in their midst an "epileptologist." Striking, however, in the listing is the wide panorama of patterns that exist in different parts of the country and from which a community might choose to fill a newly recognized gap in its services to handicapped children. No indication was given to the committees of preferences for one or another resource listed.

Column III, on Handicaps Included, reflected the combination of the twelve separate blueprints, in that any given service is not equally applicable to all the diagnoses. It was useful to the evaluating committees, moreover, to call attention to occasions when a given type of service could be applied to more than one diagnosis, even when those conditions seem quite different from each other in nature and in needs.

Column IV, on Minimum Geographic Accessibility, contains a concept fundamental to the evaluation of any community program for handicapped children. This is the distinction that is made between a service on the one hand that is needed in close proximity to the home and a type of service on the other hand that may be called upon seldom in a child's life and for which the family can reasonably be expected to travel some distance. The local type of service must be readily available to the child to be considered a resource at all. It must be reduplicated over and over in all communities. The central or district type of service, however, would be looked for only in the larger urban communities and would constitute a regional resource to the geographic area depending upon that city for medical leadership. Without such a distinction between local and regional classification of services, a self-evaluating committee cannot determine whether a remote service can meaningfully be considered accessible to local children and whether or not a gap in the local services exists merely because that type of service happens to be situated outside the immediate geographic area.

How large a geographic area constitutes a region or district would vary with the part of the country, the density of the population, the means of communication and the practices of the people. In some states and for certain services, one could envisage a single facility of its kind in one city for an entire state. There was no service of this "central" type on the Georgia Blueprint. In other places and for other types of services, the state or even areas crossing state lines on a regional basis could have several of each type of service. These have been labeled "district" services.

The county self-evaluation committees were not asked to focus upon services that were classified in column IV as "district," but to concentrate upon those that were labeled "local." For the District services, a separate central committee viewed for the state as a whole the resources that existed in medical centers or larger communities and that might be considered available to populations in the smaller communities or rural areas about them. The findings of the central committee were combined with those of the local community committees with the added understanding that the latter would express an opinion as to the actual availability of district services to children in their communities.

Column V attempted to approach the question of Amounts of Service. (See code on front of composite Blueprint.) For many services, it was considered sufficient to distinguish between their presence or absence without any effort to measure the service in any quantitative units. Modifying descriptions of a service that was present were made in the sub-groupings under the code "P." Although these are admittedly subjective impressions, they probably warrant gross credibility in view of the types of persons who were selected to analyze the situation in their own communities. Where a service seemed measur-

> able, the code of "Q" for quantity was assigned and units of measurement as indicated in column V of the Blueprint were established. An obvious difficulty here existed in separating out the amount of time given by a service or worker to handicapped children when the service was rendered as part of a more generalized program. The estimates of time are, of course, approximations.

The committee chairman and then the committees were given separate briefings on the use of the Blueprint. With the selection of a knowing group of committee members, it was found that most of the information was available without exhaustive inquiry. The committees were able to break up the tasks among themselves when additional information was needed and a telephone call or at times a personal visit to the official of an agency was sufficient to answer the remaining questions. After completion of briefing, the committee was given a month to gather the material, less time than was needed for organization of the committee and its orientation. The forms were completed in writing and sent to the central headquarters in Atlanta for analysis.

Descriptive Compilation of Findings of the Self-Evaluation Committees

The 159 counties of the state were classified into three groups. Group "A" consisted of counties with a large city; one with more than 70,000 population. In Group "B" were counties that had a medium-sized town, ranging in population between 10,000 and 40,000. Group "C" were rural counties that had no community of 10,000 or more population. B and C counties that were within about forty miles of one of the larger cities were considered as having reasonable access to services in those cities that did not have to be "local." Fourteen of the 159 counties were selected for evaluation. The counties that were selected encompassed the seven largest cities in the state: Atlanta, Augusta, Albany, Columbus, Macon, Rome and Savannah. Atlanta and Augusta are the locations of the two medical schools in the state, Emory University and the Medical College of Georgia respectively. Appendix D gives data on the counties, their locations and total population. Much of the major non-agricultural industry of the state is included in the urban counties. Agricultural areas are represented only occasionally among the 14. Rather than a fully representative sample of the state, examples were sought of each of the grossly different patterns of medical care and use of medical services in terms of relationship to a metropolitan population center. According to persons in best position to know, there is good reason to conclude that counties not covered by the self-evaluation have a pattern of service generally similar to the counties of comparable organization and structure that were appraised. The conclusions are not quantitative ones, but attempt to give a picture of categorical adequacy or inadequacy of services, locally and on a regional basis. Of necessity, the study was restricted to within the political boundaries of the state. The crossings of the state line by people living at the periphery to seek medical care in larger communities in adjacent states was not considered although it no doubt is an appreciable factor in one or more areas.

As would be expected, the greatest variety and largest number of medical specialists as well as specialized personnel in other fields of work are in general available in the metropolitan area of the largest city and state capital, Atlanta. A concentration also exists in Augusta, the community of the other medical school. The state is so large in area, however, that the two medical school cities do not constitute the sole location of specialized services. These occur rather widely more or less in proportion to the size of the other cities. Each one of the larger cities is a hub for the area around it, running approximately halfway toward the other nearest, large urban center. It so happens that the larger cities are spaced in different parts of the state so that one might say that each has is own sphere of influence in health and other public services. These areas are roughly the southeastern part of the state around Brunswick, the eastern part around Savannah, the northeastern part around Augusta, the western portion around Columbus, a central zone around Macon, and a northwest region covered by Rome and Atlanta. In general, eyes turn toward Atlanta, even though it is not centrally situated. State Government and other agencies and organizations have their central headquarters there.

Case Finding: For more than half of the twelve handicapping conditions, case finding throughout the state is largely unorganized. The children are found in the usual fashion by parent referral, by public health nurses, by physicians in the process of seeing sick children or sometimes giving health supervision to supposedly well children, and by public schools through the physical examinations. The public schools, in meeting their responsibility for universal education, try to discover children of school age who are not in school for reason of having one or another handicapping condition. But adequate school health programs do not exist in all parts of the state.

The itinerant clinics of the State Health Department aim at the total child approach for those children who come to these clinics and for the limited number of diagnoses included in the program. On the whole, however, the concept of case finding as including the discovery of the unmet needs of total rehabilitation in a child known to have a handicap is not widely held. Exposure of unmet needs usually occurs in the process of giving medical care rather than through a purposeful and reasonably well formalized matching of services being rendered to any given child against a standard that encompasses the total spectrum of rehabilitation.

Registration: There is no state-wide or local register of handicapped for either statistical or service purposes, except listings of those who happen to come in contact with or receive direct service from one or another agency. The State Health Department lists all patients receiving service under its programs, which are largely limited to orthopedic conditions, cerebral palsy, cleft palate, heart and cosmetic defects. The Georgia Heart Association lists children who come to its knowledge, as does the Junior League School for Speech Correction in respect to children with speech impediments. The University of Georgia in Athens has for some time maintained lists of children with mental retardation, psychological disturbance or speech impairments who have been tested through its specialized testing services.

Diagnosis and Recommendation for Care: The state can pride itself on a good number of medical specialists from almost all the fields of medicine. Although their distribution, as one would expect, is exclusively in the urban centers, it is not restricted to the largest cities. The smaller cities can boast of the presence of some of the most highly specialized fields of medical work. The same cannot be said of related non-medical disciplines, such as social work, special education and vocational counseling.

In the larger cities, some types of diagnosis are obtained through pediatric and other specialty clinics in hospitals. Through itinerant clinics, orthopedic and cardiac conditions are rather well covered in many parts of the state. Within limits, the state helps transport children to clinics. Except for the Crippled Children's service of the State Health Department, an occasional child guidance clinic and a few other specialized services, the multidisciplinary team approach to diagnosis and planning of care is not usually practiced. The Medical College of Georgia has developed a rehabilitation program in Augusta which gives some multiprofessional diagnosis and care. Of course, private physicians and hospital clinics obtain consultation from the various medical specialties, but they seldom seek beyond the field of medicine.

The availability of diagnostic services varies according to the condition. These are here discussed in the order in which they appear in the Blueprint, first for clinic services and then for individual practitioners. (Blueprint in Appendix W is not in exactly same order.)

Clinics:

Cerebral palsy Except in a number of special cerebral palsy clinics such as that of the Cerebral Palsy School Clinic of Atlanta* and those in one or two other communities, the diagnosis of cerebral palsy is made in orthopedic clinics, but special personnel are not usually added to meet the different needs of the cerebral palsied children. It is particularly difficult to integrate the psychometric and speech aspect of diagnosis into the orthopedic programs.

Cleft palate Diagnosis of cleft palate is encompassed in the special program of the State Health Department's Crippled Children's Division, but is limited to clinics held every other month in Atlanta for state-wide clientele.

Cosmetic defects Diagnosis of cosmetic defects is largely a matter for the pediatrician and plastic surgeon, with insufficient emphasis on the psychological implications. The Crippled Children's

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*Now Cerebral Palsy Center of Atlanta

Division of the State Health Department holds a plastic surgery clinic in Atlanta for state-wide *clientele* five times a year and at these clinics attempt to give consideration to the secondary effects of cosmetic defects.

Epilepsy Some approach to a team diagnosis of neurological conditions, including seizures, is available in Atlanta and is at times included in the services of the child guidance centers.

Eye condition Diagnosis is widely available by individual physicians and in clinics but not often enough is the clinic work coordinated with pediatric attention to the child's general health.

Hearing impairment Some diagnosis, but not through comprehensive teams, is available from speech programs at the Junior League School for Speech Correction in Atlanta, the University of Georgia in Athens and the Medical College of Georgia in Augusta.

Heart Diagnosis of heart conditions is rather well covered by the Georgia Heart Association. Social workers are usually present in the clinics. Children with handicaps are accepted by the Crippled Childrens Division.

Mental retardation Psychometric testing is available in some of the school systems. More comprehensive psychologic appraisal is done in certain child guidance clinics and university departments of psychology. The pediatrician is usually not involved in such programs.

Orthodontic conditions Diagnosis of orthodontic abnormalities is available to a very limited extent in teaching clinics of the two dental schools.

Orthopedic conditions Diagnosis of orthopedic handicaps, as stated before, is quite well covered in most parts of the state by the State Crippled Children's service itinerant and permanent clinics and at the Warm Springs Foundation.

Personality disorder Child guidance clinics with a multidisciplinary approach to diagnosis, but not usually strong in pediatrics, are available, especially in the University of Georgia in Athens and in Macon.

Speech impairment Speech impairment has received considerable emphasis in Georgia for a number of years, particularly under the stimulus of the Junior League of Atlanta. In addition to the Atlanta area, diagnosis of speech defects is available in Augusta at the Medical College and at the University of Georgia in Athens.

Special diagnosis by individual practitioners:

Cardiology as a separate specialty is rare in the state. Qualified internists usually include cardiology in their work and are present in the "A" counties and in most of the "B" counties. (See page 67.)

Neurologists are usually present in A counties and not in B and C. No physician limits his practice to seizures.

Ophthalmologists are usually present in A and B counties.

Orthodontists are limited almost entirely to A counties; one is occasionally present in a B county.

Orthopedists are present in A counties and in some B.

Otologists are usually present in A and B counties and occasionally in a C county.

Physiatrists and physicians trained in rehabilitation work are restricted almost entirely to Atlanta, the two medical schools and the Warm Springs Foundation. No physicians in the state limit their practice exclusively to cerebral palsy.

Plastic surgeons are limited to the large cities in the A counties.

Psychologists are found almost exclusively in A counties, but occasionally one is employed in a B county school system.

Psychiatrists are found almost exclusively in A counties.

Speech correctionists are usually in A counties, but occasionally are located even in a C county in the employ of the local school system.

General Health Supervision

Medical Care

Private general practitioners are available in most of the counties. There are, however, a few rural counties without any practicing physicians at all. Pediatricians are present in all the A and B counties but not in any of the C counties. Where child health conferences exist, they are usually run by health departments and vary considerably from one part of the state to the other. In certain of the rural counties where there is a particular lack of practitioners, child health conferences are held rather frequently, but do not adequately cover the entire geographic area. There is no state-wide comprehensive program for assuring general health care to children in the low economic groups, through the State Health Department, local health departments, or through the State Welfare Department's program of medical care for indigent families.

The school health program also varies considerably from one part of the state to the other. In some areas services are well developed in others meager. There seems to be more nursing service furnished in association with the public schools in the rural portions of the B counties than in the towns. In the C counties, general public health nurses include school health in their work. In some places, emphasis is given to an annual preschool summer roundup. A favorable deviation from other comparable counties exists in the school health demonstration in the Pike, Lamar, Spalding tri-county area.

In summary, the state does not have an organized and comprehensive pattern of supervising the health of well children, either of pre-school or school age, whether they are or are not handicapped. The major responsibility for child health supervision naturally rests with the private practicing physicians. But the acceptance by the public of the importance of supervising the health of well children and the time devoted to it by physicians is not as extensive as in many other parts of the country. The Crippled Children's Division of the State Health Department has no organized program of assuring general health supervision to the handicapped children under its care.

Dental Care

Private dentists are rather well distributed in A and B counties. A dental clinic is operated by the dental school. Most of the dental services for children outside of private dentists' offices come under the local health department. These vary considerably throughout the state without regard to whether the county is A, B or C. No consistent pattern is evident in the three groups of counties. An occasional local health department has a full-time dentist doing work in schools primarily in the lower grades. Part-time dental services are furnished by the local health department in some school programs in all types of counties including the rural ones by a rotation plan among the practicing dentists. In an occasional B county, local groups interested in cerebral palsy have arranged for special dental care to be given to cerebral palsied children. When the local public health department has a more extensive dental care program for the school age child it is limited to the low economic groups, both white and colored. No general dental care program is included in the Welfare Department's medical care responsibilities for indigent persons. The Crippled Children's Division of the State Health Department does not assume responsibility for general dental care for handicapped children on its lists or under treatment by the Department.

Fluoridation is being promoted by the state and local official, voluntary and professional organizations. It is not in general practice up to this time.

Special Health Care

Medical Care

Similar to the description of available resources for special diagnosis, the responsibility for giving special medical care to handicapped children rests with private specialists and specialty clinics where available. As described above, the specialists are predominantly in the larger cities, with variations among the different specialists. In a number of counties, the local medical society runs general pediatric clinics on a weekly or less frequent basis. Pediatricians and some of the other more common specialists are at times available to parts of a C county from an adjacent B county. A home-care service as an extension of a hospital is limited to one restricted program in Atlanta run by the Medical School of Emory University.

Special Dental Care — Orthodontic

As stated before, the distribution of orthodontists is primarily limited to the larger cities including most of those in the B counties. The dental school holds orthodontic clinics. Public schools do not do orthodontic work nor does the Health Department have an orthodontic program in its Crippled Children's Service.

Special Health Care — Therapies

Physical therapy is available from general physical therapists working in hospitals or in private practice in the larger communities. In addition, direct physical therapy is offered in a limited number of special programs for cerebral palsied children and sometimes for other kinds of orthopedically handicapped children in several of the larger communities.

Supervision or consultation for physical therapy is available to a limited degree in connection with the itinerant clinic program of the Crippled Children's Service of the State Health Department.

Occupational therapy is available in hospitals in an appreciable number of the A and B counties and in certain specialized services for orthopedically handicapped or cerebral palsied children in several of the large cities.

Consultation from occupational therapists is occasionally available on a very limited basis.

Speech training is furnished by the Junior Leagues, public schools, and Universities in decreasing availability as one moves out from the metropolitan centers to the rural area. Even where special attention is given to speech, it is not available to all diagnostic categories listed in column III of the Blueprint. In Savannah, for example, a speech program is offered for children with cleft palate, hearing impairment or orthodontic defects, but not to the emotionally disturbed, mentally retarded or cerebral palsied.

Indirect consultation or supervision for speech therapy tends to be more readily available when a speech program exists in the B counties than in A. The magnitude of the task in the larger cities apparently makes it impossible for the speech worker to extend himself beyond his direct service duties.

Lip reading, hearing discrimination, and language development are associated with other services for the hard-of-hearing in a number of the B communities as well as being offered in some of the specialized programs in the larger cities.

Orthoptic training. There is one trained orthoptist working in private practice in Atlanta. At the time of the survey, another was expected in one of the other large cities. There is no orthoptic service in any hospitals or in the State Crippled Children's Programs.

Prostheses

Orthopedic appliances, hearing aids and other types of prostheses are usually available in conjunction with corresponding special services. Commercial appliance companies are present in the larger cities and in some instances give itinerant service in the smaller communities. A bracemaker attends the itinerant orthopedic clinics of the State Health Department.

Home Nursing Service

By and large, home nursing is conspicuous by its absence. Occasionally, a limited amount of emergency home nursing care is given by visiting nurse services. Otherwise, public health nurses give home nursing care for purposes of education and demonstration to the family.

Hospital or Institutional Care

Medical Care

Short-term medical care in the hospital is available in general hospitals in the larger cities for all diagnostic groups with the exception of emotionally disturbed children and children with epilepsy. In the Atlanta area, there are three private sanitoria that do accept children for psychiatric care.

Short-term hospital care for surgery

General surgery is available in all general hospitals. Highly specialized surgery, such as neurosurgery or thoracic surgery, is more restricted and is done chiefly in Atlanta and in connection with the two medical schools. Warm Springs has 165 beds limited to white patients with orthopedic problems.

Convalescent Institutional Care

In Atlanta, there is only one convalescent institution for children, Aidmore. Aidmore accepts white and non-white patients with orthopedic and cardiac conditions from all parts of the state. The Warm Springs Foundation keeps children for convalescent periods after orthopedic surgery or other treatment. In Thomasville, Archbold Memorial also accepts orthopedic and cardiac conditions but has for this purpose only about ten children's beds that are primarily for patients in the area. There are no other convalescent care institutions in the state. The limited facilities reflect the current trend toward shorter hospital stay in the care of handicapped children.

Long-term Institutional Care

Long-term institutional care is limited entirely to the mentally retarded, and this practically to a single institution. The State

Department of Public Welfare operates the Georgia Training School for Mental Defectives at Gracewood. The capacity of 750 is limited to white children over six years of age. A long waiting list exists. The special needs of the children who have multiple handicaps in addition to mental retardation cannot be met adequately in this institution.

Detention Homes

The County Juvenile Courts in the three largest cities have their own detention homes. In addition, private homes are used for this purpose.

Foster Home Care

Limited local and Federal funds, but no state funds, are expended for foster home care of crippled children. The usual difficulty exists in finding families willing to undertake the difficult task of making a temporary home for a handicapped child.

Education

The Special Education unit in the State Department of Education is in effect limited to one professional person. Effective leadership at the state level is obviously impossible. Some of the larger local school systems have begun to develop special education programs for one or another category of handicap.

Daytime Education (admitted to regular classes)

Without any degree of uniformity, some handicapped children are admitted to regular classes in various public schools of the state, but relatively little special attention is given to the modification of their program in the regular class.

Daytime Education (special units)

Special classes are available to a limited extent in some of the larger communities, and occasionally in a Group C county when a particular citizens' group or the school system has shown interest. There is great variety throughout the state. By and large, the most common special class is that for mental retardation, the next for speech, with an occasional class for cerebral palsy and for children with multiple handicaps. A few communities have set up small private groups of trainable, uneducable children. By far, the majority of the special education programs that do exist are restricted to white children.

Home Instruction

Most of the school systems make some effort at home instruction for children who are unable to get to school or who cannot attend because special classes or transportation services do not exist. The home instruction program is strongest in the city areas where travel distances are shorter and the number of children is sufficient to warrant employment of teachers for this purpose.

Education for Children in Hospitals

In the larger communities where general hospitals exist, the public school system usually furnishes education to hospitalized children.

Residential Schooling

The state operates the School for the Deaf and the Academy for the Blind.

Guidance, Recreation and Employment

Recreation

There are few special recreation services organized for handicapped children in the state and their involvement in general recreation programs is extremely limited. There are a number of day camps in proximity to the larger cities where an occasional handicapped child is admitted.

Vocational guidance

The Division of Vocational Rehabilitation of the State Department of Education has 5 district offices which reach approximately 5,000 patients a year. In addition, the University of Georgia at Athens has a testing program on vocational aptitude which could be utilized by some handicapped persons who are able to get there for that purpose.

Employment

Sheltered employment is available in Atlanta to approximately 65 handicapped persons through Goodwill Industries. Programs of sheltered employment for the blind exist in Atlanta, Savannah, Griffin and Bainbridge. In Macon, there is a program of home employment that involves 25 or 30 persons with cerebral palsy, orthopedic conditions and heart disease. There is no local or state-wide organized and effective program of employment of handicapped persons through labor and industry.

Guidance, Counseling and Social Work.

The Crippled Children's Division of the State Health Department gives social work consultation to professional workers but is not able to give much direct counseling to patients or parents. Very little social case work is available from hospitals. Child welfare services do not usually extend to crippled children. Almost none is available from the official welfare programs directly to the family with a handicapped child. Where there are child welfare services in an area, the consultant or supervisor may be called upon.

Visiting teaching

Throughout the state, visiting teachers as contrasted with teachers of the homebound are extremely scarce. One of the cities has four visiting teachers but this is very unusual.

Psychological Services

Some psychological services are available through the institutions of higher learning and very rarely from a local health department.

Parent Education Program

Parent education efforts exist wherever there are special programs or citizens' groups. The larger cities have parents' groups meetings, usually for a specific diagnosis, like cerebral palsy. One community holds such meetings for parents of blind children; another for families of white mentally retarded chilren. In one community, a full-time health educator helps counsel parents. One of the rural communities has a parents' study group in connection with a special class for handicapped children.

Public Education, Professional Training and Research

Public education about handicapped children takes place through the State Health Department, Cerebral Palsy Society, Crippled Children's Society, Heart Association and other interested organizations in the various categories of handicap. These efforts need to be supported and strengthened.

Existing resources for training of professional personnel fall far short of the need, as indicated by the studies of the Southern Regional Education Board.

The great need for research would be met in part by the regional rehabilitation program.

CHAPTER V

Summary, Conclusions and Recommendations

Prevalence of Handicaps

It is estimated that about 10 per cent of the population under 21 years of age in the communities studied are appreciably handicapped by one or more of the twelve conditions included in the investigation. The calculated prevalence for each of the conditions is given in Table 40.

Table 40. Estimated Prevalence of Handicapped Children in Clarke-Oconee Counties

Diagnosis	Estimated No. Per 1,000 Children Under 21
Cosmetic	37
Mental Retard.	37
Speech	27
Personality	26*
Eye	23
Hearing	19
Orthodontic	15
Orthopedic	11
Heart	9
Cerebral Palsy	5
Epilepsy	4
Cleft Palate	1
Any of above diagnosis	108

*Does not include children under eight years.

Among the handicapped children, multiple handicaps existed in about two thirds of the cases. The average number of handicaps in the group was 2.2 per child.

Prevalence of Functional Disabilities

The estimated prevalence of various functional disabilities is listed in Table 41.

It can be seen that the physical disabilities are all at the lower end of the list in frequency of occurrence as compared with non-physical limitations. Obviously, several disabilities co-exist in the same children to an even greater extent than do multiple handicaps, because each health defect usually produces a combination of disabilities.

Types and Amounts of Services Needed

An estimate is presented in Table 42 of the types and amounts of service demands made upon a community to meet the needs of its handicapped children.

As would be expected from the nature of the functional disabilities that exist, the greatest amounts of service needs occur in respect to education,

Table 41. Estimated Prevalence of Functional Disabilities in Clarke-Oconee Counties

Disabilities	Estimated No. per 1,000 Children Under 21
Educational restriction	62
Social non-acceptance	52
Mental retardation	37
Maladjustment of family	35
Speech impairment	26
Personal maladjustment	25
Vocational limitation	24
Hearing impairment	19
Impairment of visual acuity	16
Impaired dental function	15
Impaired walking	11
Limitation of use of upper extremities	5
Seizures	2

guidance and vocational aid. The demands for these are staggering and constitute a special challenge because these are the very services which are least developed.

Table 42. Estimated Number of Professional Personnel and Services Needed, by Type, for Handicapped Children Under 21 in the Population

A. Type Personnel	Estimated number of total children in community for each worker needed
Social workers and other guidance and counseling personnel	2,000
Speech teachers and therapists	2,000
Physical therapists	5,000
Home Nursing Aides	10,000
Teachers of the hard-of-hearing and other workers in audiology	10,000
Vocational counselors	10,000
Workers in orthoptics	20,000

B. Type Services	Estimated number of children needing service per 1,000 children in community
Short-term hospital care	30
Special daytime education (various) (degrees of modification)	12
Long-term institutional care	7.5
Orthopedic appliance	6
Convalescent care	2
Sheltered employment	1.8
Dental Proethesis	1.3

Adequacy of Existing Resources

The resources in the State of Georgia for meeting the complex needs of handicapped children have gaps similar to those of most parts of the country.

Matched against the standards of a Community Blueprint (Appendix W) of services needed in the care of handicapped children, the counties of the state fall into three categories for purposes of description.

A. Counties including or close to a large city (more than 70,000 population)

B. Counties including or close to a medium-sized city (10,000 and 40,000 population) *

C. Rural counties remote from any population center.

Highly specialized services that are not needed on a frequent or local basis (See Blueprint for services marked "District") obviously emanate from the larger cities and medical centers. All such services usually become progressively less adequate as one radiates outward from the population concentrations. This pattern is interrupted in favor of the peripheral areas only when a program is specifically organized on a regional basis for relating the services at the hub to the needs at the pheriphery. This has been done by the Crippled Children's Services of the State Health Department with considerable effectiveness in respect to diagnosis and to some degree of on-going supervision for some orthopedic conditions and certain other handicaps, and for heart disease by the State Heart Association. Individual medical and dental practitioners, clinics and hospitals for out- and in-patients care of most general and special medical needs are reasonably well represented in A and B Counties, but not in C.

The presence of these services, however, does not mean that all children benefit from them. The usual financial and other considerations curtail their general availability. The specific therapies, physical, occupational and speech, are rarely available in sufficient amounts in any of the three categories of counties.

The team approach to medical diagnosis and care is used to a degree for cleft palate, cerebral palsy, speech, orthopedic and cardiac conditions.

The State's program of special education is still in an embryonic state. (See Southern Regional Education Board reports). The numbers of qualified persons are inadequate at the State level for planning, administration and consultation as well as in local school systems for all types of special education. Special classes that do exist are predominantly limited to schools for white children.

In respect to vocational planning and training, the combined efforts of the public schools, the Crippled Children's Service of the State Health Department, the Division of Vocational Rehabilitation of the State Department of Education and occasional voluntary and educational institutions fall far short of meeting the needs of handicapped children of the state.

Goodwill Industries and other organizations offer sheltered employment only in a small number of communities. An organized effective program of job placement and supervision with the joint interest of industry and labor has not yet been developed.

Guidance and counseling to patients and families supplementary to the physician's interpretation and advice are given in the form of social work by the Crippled Children's Service of the State Health Department and

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*There are no cities in Georgia between 40,000 and 70,000 population.

some hospitals and social agencies, and in certain types of psychological service by the University of Georgia and other institutions. The sum total of all efforts does not begin to approximate the tremendous need.

The state institution for long-term care of white mentally retarded children is overcrowded and understaffed, with waiting lists and consequent prolonged delay in admission of applicants. No institution exists for negro mentally retarded children (situation at time of study.)

RECOMMENDATIONS FOR GEORGIA

Recommendations are not given in quantitative terms or in dollars to be expended. The study findings furnish data for estimating the magnitude of the total problem under Utopian standards. To offer the final goal as the present recommendation would be impractical. What is urged is a state-wide effort as well as local community efforts for efficient and effective pooling of resources, and planned step by step improvement of services at a pace consistent with realistic possibilities of development of personnel and facilities.

A Coordinated State-wide Plan for Handicapped Children

While considerable expansion of services is needed, addition of service in the absence of a coordinated plan would be wasteful. Even the existing programs lose some of their effectiveness through lack of communication and consequent gaps in continuity of care. A *plan* is recommended—*not* a program. The distinction is evident in some of the following principles:

The roles and responsibilities of individual practitioners, institutions, agencies and organizations must be respected.

The coordination process should strengthen the various individual and group activities rather than supplant or duplicate.

Policies and practices should develop out of agreement among the different groups.

Financial support should come from voluntary and official sources, with a strong element of family responsibility.

Inequalities in accessibility of services among urban and rural populations should be compensated for by regional organization.

The impact of shortages in facilities and qualified personnel should be reduced by flexible policies of admission on the basis of service needed rather than a specific medical diagnosis.

Individuals and agencies that give service should try to set the scope of their work or program to round out the community program.

They should view their service to any particular child as part of a total rehabilitation effort for him.

The nature and pattern of services should be flexible to keep pace with new knowledge and resources.

Community effort should emphasize prevention, public education, professional training and research.

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It is recommended that the state-wide plan include the following elements:

A coordinating and planning committee adequately staffed, and housed in the Crippled Children's Service of the State Health Department.

For administrative planning and evaluation, a central statistical tabulation on handicapped children and a directory of resources for their care, maintained by the Crippled Children's Service on the basis of data furnished by the regional registers described below.

Division of the state into regions or districts, each serviced by a rehabilitation center. It is recommended that at the outset the state be divided into three districts with the centers located in the medical schools in Atlanta and Augusta and in or in close affiliation with a general hospital in Savannah. Depending on developments, the state can, at a later date, be divided into four to six smaller districts with additional centers located in most favorably situated cities, such as Macon, Brunswick and Columbus.

Suggested functions and policies of each center include:

A regional register of handicapped children and a directory of services maintained there by the Crippled Children's Service to facilitate treating of children and following them over the years to prevent discontinuity of care.

An inter-disciplinary diagnostic team for appraisal of the children and for drawing up a plan of care for each. Non-medical members of the teams should be assigned from appropriate agencies, such as the Divisions of Special Education and Vocational Rehabilitation of the State Department of Education.

When a child is under the care of a qualified private physician or specialist for a specific service (e.g. orthopedics or plastic surgery) invitation of the specialist to be a member of the diagnostic team for his patient in order that (1) he can bring his information and opinion to the team decision; (2) his care of the patient can be supplemented by a plan for meeting the educational and other needs of the child.

A limited amount of short-term in-patient care for diagnosis, medical stabilization and surgery.

A limited amount of out-patient treatment for selected patients living in close proximity to the center.

A counseling service for patients and families.

A consultation service to treatment agents and agencies in the local communities by involvement of all available qualified specialists in the region.

A Strengthened and Expanded Program of Special Education for Handicapped children in State Department of Education

An enlarged central staff in the Division of Special Education of the State Department of Education, including, beside the director, a chief consultant in each of the major specialties in special education—particularly mental retardation, speech and hearing.

A staff of field consultants in the same Division to help develop programs in local schools and to advise on newer practices.

Increased state financial aid to local school systems for special education, with the basis of allotment being the number of children receiving special education that meets a standard of quality, whether in special or regular classes.

State support of programs and scholarships for training teachers in special education. Participation in southern regional plan (see report of the Southern Regional Education Board, "Teachers for the South's Handicapped Children," 1955).

Strengthening the Crippled Children's Service Program in the State Health Department

Maintenance of registers centrally and in the rehabilitation centers, as described above.

Inclusion of certain categories of handicap at present omitted from the program.

Addition of disciplines to clinic staffs to round out the professional teams.

Furnishing certain medical services and therapies for special units in public schools where daily attendance necessitates bringing the therapies to the schools.

Support of professional training and research.

Strengthening the Program of the Division of Vocational Rehabilitation of the State Department of Education

Coordination with activities of the Crippled Children's Service of the State Health Department so as to initiate vocational planning at as early an age as desirable.

Utilization of the rehabilitation centers described above.

Greater support of sheltered employment placements.

Strengthening of the State Program for Institutional Care of Retarded Children

Enlargement of existing physical plants and construction of new facilities for white and negro children.

Addition of personnel in education, psychology and social work.

Development of the medical program in the institutions to cover fully intercurrent and chronic illness and appropriate care of physical conditions associated with the mental retardation (e.g. cerebral palsy).

Comprehensive pre-admission and periodic post-admission psychological appraisal.

Adequacy of existing resources

Little fundamental deviation would be expected in other states from several observations made in the study:

Most specialized services exist in inverse proportion to distance from population centers.

A well integrated interdisciplinary medical and non-medical team approach is seldom present.

Non-medical services, such as special education, vocational aid and mental health counseling are in greater shortage relative to the needs than medical services.

Under the leadership of the U. S. Children's Bureau, community services for orthopedic conditions, heart disease and cosmetic defects have been better developed in most states than services for the other handicaps.

In almost no local communities have the various official, voluntary and individual resources been coordinated for most effective and economical use of their potential capacities in the care of all diagnostic groups of handicapped children.

Summary of Recommendations

Develop state-wide plans for coordination of services, based on functional rather than diagnostic organization of services, and regionalization of services around rehabilitation centers.

State support for professional training, research and public education.

Bring up to adequacy the facilities and programs of the state institutions for mental retardation.

Strengthen the programs of the official State Crippled Children's agencies, and the Special Education and Vocational Rehabilitation Divisions of the State Departments of Education.

Strengthen the corresponding Federal agencies to give national leadership and consultation and to support professional training and research.

CHAPTER VI

Implications for Administration and Community Organization

In the process of doing the survey of handicapped children in Georgia, a kind of "mock-up" of certain aspects of a crippled children's program was conducted. Admittedly, experiences cannot be translated from one type of activity to the other without modification. Lessons, however, were learned about administration of services, and organization of communities for service, even though the primary purpose of the effort was research rather than service *per se*. The present chapter attempts to draw limited inferences from the experiences as well as from the findings of the study.

Prevalence of handicapping conditions in children

It is a rather shocking realization that approximately ten per cent of all children under twenty-one years of age have a handicapping condition. Without much doubt, this estimate is an understatement. Many of the handicaps of very young children in the preschool years and in infancy were not uncovered. Although the study did include a dozen different handicaps, it still excluded other chronic conditions of childhood, such as severe asthma, diabetes and kidney disease. The study was a cross-sectional one, merely identifying the status of the children at a moment in time. While it is true that not all the handicapping conditions found were of a permanent nature, the majority were and would remain with the children throughout their lives. Other children, not handicapped at the time of the study, would become so by disease or accident some time before reaching adulthood. Therefore, *more* than ten per cent of children alive at any moment are handicapped or are destined to become so before leaving childhood.

When approximately ten per cent of all children in a society are handicapped in one way or another, this is so common a situation that meeting the needs of these children must be part of the health program of every community. Services at a local level are essential.

A. Means should be available for case finding and some type of general public education about the problem should exist.

B. Those components of rehabilitation that are needed frequently by children should be locally available. Examples are — schooling, speech and physical therapy, and family counseling that could be provided by a public health nurse.

Only the less frequently called-upon components of rehabilitation need not necessarily be "local" and might still be considered reasonably available to the children in a community. Examples of this would be surgery and special diagnostic procedures.

The high prevalence of handicaps among our children gives basis for a careful look at the quantitative dispensing of service. The remarkable expansion of interest in and programs for various categories of handicapped children which occurred in the past twenty years were understandably launched with an initial tendency toward giving more service than might be needed. In the enthusiasm and hope of new developments, there was a tendency to generalize that it is good to start treatment as early in the life of a child as possible, to give him all the types of service that one can think of, and to do this over a span of time without interruption. Such a pattern of care did not allow for readiness, varying needs and the importance of lapsed time for absorption by the child of the effects of treatment in a stepladder-like fashion, with spurts and plateaus. In the clinic evaluations that were done in the Georgia study, the professional teams did not go overboard in this fashion. For each child, the team tried to estimate in as practical a fashion as possible what services, if available, could be of benefit or should be tried. Even with this conservatism, a staggering amount of personnel was estimated to be needed for handicapped children in any community; such estimates as one social worker and one speech worker for each 2,000 children under twenty-one years of age in that community, one physical therapist per 5,000 children and one vocational counselor per 10,000. The needs also added up to a tremendous amount of medical, institutional and other types of care, such as the number of days of hospitalization, the amount of special education and the number of different types of prostheses that are needed.

What are the implications in program planning and development of the recognition of this need for caution with respect to quantitative rendering of services? Professional workers should be extremely selective in the recommendations they make for treatments to be given to individual children.

Selectivity implies establishing for each child specific realistic goals. These should be reasonably short-term goals within the framework of generally appropriate long-term expectations for that child. There should be periodic reassessment and modification of the goals rather than mere continuation of the investment of effort beyond the point of reasonable returns.

What are reasonable goals? These are not necessarily "maximum" correction, such as the fullest possible orthopedic functional results that could be obtained by repeated surgery. Ten per cent less function of a limb might be better for the child and family, with reference to family sacrifices, psychological trauma to the child, and limitation of social experience and of stimuli toward emotional maturation. The same concept of appropriate rather than *maximum* correction might apply to other aspects of rehabilitation, such as speech.

To establish goals for a child, one must be able to assess his status and his potential. Baselines for such assessment are necessary. The baselines should be refined in each instance to as detailed components of a child's functioning as are relevant to the types of treatment that are contemplated.

Implicit then is the necessity of an agency's evaluating the effectiveness of its service, preferably on all its cases but at least on a sample of them. This should be done by a built-in process of perodic reassessment of children under care. In summary, the components of evaluation include:

1) The initial status of the child.
2) The estimated optimum end-point at a specified interval of time.
3) Treatment needed to achieve that end-point.
4) The amount of progress achieved toward that end-point during the specified interval.
5) The amount of recommended treatment actually received by the child.
6) Interpretation of the findings, such as —
    a) The child exceeded expectations; the goals had been too conservative.

b) The child failed to achieve expectations; the goals had been unreasonable or the recommended treatment had not been obtained.

Any given institution or agency would not be expected to make the above evaluation for more than one type of treatment regimen. It would at least gain a more objective picture of its own results and possibly might contribute to comparison with other types of treatment given elsewhere, if standardized methods of measurement are used (such as suggested by Rehabilitation Codes).

It is evident that handicapping is a public health problem. General recognition has been given to the considerations of cost to family, cost to community and cost to agencies; the complexity and scope of services needed; and the common need for long-term and repeated care. Added to this is the hidden cost of reduced income when the child becomes an adult, and especially the burden to the community if he is permanently dependent. No society can afford to overlook its responsibility to handicapped children.

Prevalence of different diagnoses

The twelve handicapping conditions covered in the Georgia study could be divided into three groups, on the basis of general levels of prevalence:

Frequent:

Ranging from 23 to 37 per thousand children under twenty-one years of age
- Cosmetic
- Mental retardation
- Speech impairment
- Personality disturbance
- Eye conditions

Less Frequent:

Ranging from nine to 19 per thousand
- Hearing impairment
- Orthopedic
- Orthodontic
- Heart

Infrequent:

Less than one to five per thousand
- Cerebral palsy
- Cleft palate
- Epilepsy

Such classification gives gross leads to the distribution of services that would be appropriate and the size of an area that might be served by an agency, with respect to population density. As a rule, a smaller volume of service demand entails a centralized distribution over a large area in order to warrant even the minimum operating unit of personnel and facilities. On the other hand, a larger volume permits replication of such units closer to each other and to the people whom they serve. These considerations, for example, were the basis for recommended grouping of special education services in day schools.[1]

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[1] Wishik, Samuel M., and Zelda S. Klapper, "Organization and Function of Day School Units for Cerebral Palsy," Exceptional Children, 20:4 (January, 1954), 164-175

Mental retardation groups and speech instruction could be made available in all but the smaller schools, whereas cerebral palsy facilities are needed in a very small proportion of schools.

It should be pointed out that the frequency with which a clinic is scheduled is not completely determined by the prevalence of the condition to be treated in that clinic. There is a minimum frequency that will meet the periodic recurrent needs of even a single child. Only when the case load exceeds the capacity of a clinic session is there indication for scheduling more frequent sessions.

Multiple handicaps

The Georgia study found that handicapped children had an average of 2.2 handicapping conditions each. Among the 426 children, only 29 per cent had a single diagnosis. Thirty-nine per cent had two diagnoses; 17 per cent had three; 10 per cent had four; 4 per cent had five; and one child had six different conditions among the twelve diagnoses included in the study. Heart conditions were least often co-existent with other diagnoses. It is difficult to isolate any handicapping condition in a group of children among whom there would not also exist a wide variety and many combinations of other conditions in need of care. This means that if services for handicapped children are organized purely by diagnoses, any ordinary clinical team of specialists will find itself studying children who have other conditions that fall outside the scope of competence of those specialties. From this, conclusions can be drawn to the effect that:

A. Community services should be organized functionally rather than by diagnoses, if possible. For example, speech therapy could be the basis for service organization rather than cleft palate, cerebral palsy, mental retardation, hearing impairment or speech difficulty, each of which might require speech work.

B. The more specialized services for handicapped children should be multidiagnostic in scope. The arch example of this is the rehabilitation center.

C. If the existence of multiple handicaps were only an occasional occurrence, the usual practice of referral from one specialist to another would suffice. Since the majority of handicapped children have multiple handicaps, consideration should be given to ways of meeting this situation more efficiently than merely by referral. Since certain combinations of handicaps co-existed more frequently than others, clues exist for some degree of clustering of diagnostic conditions in organization of clinics or other services. It goes without saying that speech and hearing could be together; cerebral palsy and orthopedic conditions combined; mental retardation and emotional disturbance could be seen together, at least initially; epilepsy and neurological conditions are inseparable. Perhaps the last four could be a common grouping, especially for screening purposes. Two other examples are: grouping mental retardation, cerebral palsy and epilepsy; and combining speech, hearing and cleft palate.

As an alternative, rather than combining whole teams, one or another discipline could be added to a team because of the frequent co-existence of diagnoses which call for the competence of such a discipline. For example, mental retardation was found to be conspicuous in association with problems of hearing, speech, cosmetic disfigurement, epilepsy, emotional disturbance, cerebral palsy and orthopedic conditions. A psychologist is needed in these clinics, if for no other reason than to make an assessment of the child's intellectual capacity. Speech difficulty was conspicuous in connection with cleft palate, hearing, mental retardation, orthodontic conditions and emotional disturbance. As another example, it is obvious that a speech specialist belongs with a cleft palate or a hearing impairment team. Seldom, however, has it been deemed appropriate or necessary for a speech worker to be present routinely at clinics for orthodontic conditions, emotional disturbance or mental retardation. Yet more than one-third of the cases of mental retardation had a speech defect.

D. Without exact regard to the diagnoses, functional disabilities occurred in various combinations. The presence of such combinations of disabilities can help to suggest the treatment most appropriate. For example, the association of mental retardation with cerebral palsy warrants such children being cared for in a service primarily focused on mental retardation, but including in its scope of services physical therapy and other needs of the cerebral palsied mentally retarded children. On the other hand, the common association of cerebral palsy with speech impairment would suggest the need for a special program for cerebral palsy, which would include speech therapy rather than the converse.

Even though a service for handicapped children is located as part of a medical center, that service can and must usually have strong components not ordinarily found within a medical setting. These services, especially those in education, are so alien to the usual medical setup that workers in those disciplines may find themselves isolated from their professional interests. Only the more comprehensive rehabilitation centers can expect to attract and to hold such workers as psychologists, speech therapists, vocational counselors and teachers of special education. In view of this, many of the components of the community rehabilitation blueprint may have to be obtained for children by arrangement between the medical center and other agencies which do not have a primary concern for handicapped children. Their more general interest, such as in vocational assistance, needs to be made available to handicapped children by flexible intake policies.

Conversely, there is no basic defect in an institution with a primarily educational program, whether residential or daytime education, carrying the major responsibility and calling for the medical components from other sources by arrangement with a medical institution or public health agency, or even by inclusion of medical components within its own program.

There is another benefit that might result from the utilization of a more generalized service for the special needs of handicapped children. Not all persons are emotionally or otherwise able to go on working exclusively with handicapped persons. Everyone needs the gratification of seeing fairly definite progress, somewhat more definite than is often the case in this type of work. Furthermore, the professional worker can easily lose perspective if he does not renew contact from time to time with non-handicapped children who grow and develop at a more normal rate. He might tend to attribute the progress that occurs entirely to his treatment rather than in part to time and natural growth. The frequency of paired co-existence of certain functional disabilities would be of use to persons planning particular types of programs. For example, if a public school were to organize a home visiting teacher service for children whose general activity is grossly limited, so grossly as to preclude school attendance, the home visiting teacher would have to contend with speech defect, mental retardation and other disabilities in many of those children. If consideration were being given to the setting up of an orthodontic program for children with malocclusion or other dentofacial abnormalities of a severe degree, the existence of mental retardation in approximately one-fourth of these children would raise questions on the feasibility of certain types of treatment or the indication therefore. A program for children suffering from seizures should give conspicuous attention to the problems of families' guilt and shame because of the presence of a child so afflicted. A program planned for vocational aid to handicapped children should recognize that many of those in need of such help are suffering from disabilities which are somewhat obnoxious to most employers and which effectively bar the handicapped individual from easy communication and normal association with other people on the job.

In the Study, the clinic teams attempted to distinguish between primary and secondary conditions. This might be helpful nosology, but has lesser importance to the child than the fact that, primary or secondary, a combination of conditions or disabilities does exist. Attempt is made to assess the severity of the disabilities that occurred with the twelve different handicaps. (Appendix T.) From the point of view of total "disability scores," which are derived as a complex of frequency and severity.

The following associated disabilities appear most noteworthy: For cerebral palsy — society's non-acceptance, walking, mental retardation, cosmetic defect, speech impairment, use of the upper extremities and vocational limitation.

For cleft palate — society's non-acceptance, speech, cosmetic defect, personality disturbance, tooth function and mental retardation.

For cosmetic disfigurement — society's non-acceptance stands out prominently.

For emotional disturbance — family reaction and social rejection.

For epilepsy — family reaction, personality maladjustment and social rejection.

For eye condition — no particular disability other than the cosmetic effect that ensues from strabismus or other visible condition.

For hearing — society's non-acceptance and speech.

For heart conditions — no associated disabilities were particularly frequent.

For mental retardation — social rejection and vocational limitation.

For orthodontic conditions — tooth function and cosmetic defect.

For orthopedic conditions — social non-acceptance.

For speech — social non-acceptance and personality disturbance.

E. Prevalence of different disabilities helps to establish priorities in program development. In the Georgia study, the highest number of disabilities were educational and social (52 to 62 per thousand children under twenty-one). The next most frequent disabilities were in speech, personal maladjustment and vocational potential (24 to 37 per thousand). Less frequent were dental, hearing and visual disabilities, and least often there were limitations in walking, use of limbs and in susceptibility to seizures. In short, the non-medical disabilities far exceeded the medical ones. The pattern heretofore too often has been to give priority to the more tangible medical types of service. It has long been recognized that effective medical correction of physical disability is of little moment if the child grows up to become an adult with restricted education and with personal and social maladjustment. Since non-physical disabilities far outranked physical ones in frequency of occurrence, tremendous need exists for more emphasis than has been possible in the past on special education and psychological and social services as well as vocational guidance and assistance. For example, a school system has to think of a general figure of approximately six per cent of its children being sufficiently restricted in their educational capacity to benefit from some type of special educational program.

Since it is the rare community indeed that would begin to have adequate numbers of professional persons to do the task, herein is the challenge to develop and utilize auxiliary workers effectively. The different professions need to separate out from the job that they are doing those components of activities which can be relegated to less well-trained persons who would work under professional supervision. The important concept to be retained is that such a person would not be a "junior" professional person who does most of the things that the professional persons does, but does them more superficially or less skillfully or who works only with the less difficult cases. The difference should not be a vertical one, but rather a matter of careful analysis of the needs, then delegating those elements which do not require professional skills to sub-professional or non-professional workers who have been especially trained. Speech therapists should be able to develop a "speech exerciser," and the physical therapist a "muscle exerciser." The specialist in audiology should utilize "auditory trainers." Even the social worker should be able to separate out elements of activity, such as certain types of history taking, data collection and transmission of information and observation which can be useful to the social case worker and the other members of the mental health team.

In many parts of the country, the complex and costly aspects of a rehabilitation program have been organized with relatively little regard to the ages of the patients. Separation of pediatric from adult handicap and rehabilitation seems rather artificial and uneconomical. Sensible balance between pediatrician and internist should be possible.

On the same basis and along the same lines, the estimated number of children needing certain types of services give basis for estimating probable cost if such a program were to be undertaken or expanded to meet full needs. For example, six per 1,000 children in the community needing an orthopedic appliance at an average cost of $200 or thereabouts indicates that the total cost of orthopedic appliances is not so tremendous an item that community services should as often as they do shy away from this responsibility.

Adequacy of existing resources

Geographic coverage

Just as is the case with other types of public service, it is difficult to maintain the same level of services for handicapped children in the rural periphery as in metropolitan centers of population. The mere concentration of numbers of potential recipients permits more economical organization and rendering of service. The inequity in rural areas is considerably ameliorated by present day good automobile roads and means of transportation. The direction of flow of earlier years has been reversed, formerly from server to recipient with home visits by most training agents. Now the visits are made by recipients to the office of the treating agent. This trend needs to be strengthened still more in certain services.

Strangely enough, on the other hand, public health nursing has in the past twenty years, actually given up much of its earlier "office" type of practice. Now the public health nurse either works in a clinic or makes home visits. Public health nurses should give careful thought to the specific purpose of each contact with the family in order to determine whether those purposes can be obtained reasonably well at the clinic, in the office, on the telephone, by letter or by home visit. Each of these has different purposes and should be chosen consciously with those purposes in mind. Again, the shortage of personnel time necessitates compromise between optimum or ideal practice and realistically economical methods of rendering high quality care to the largest number of recipients.

Inequities between urban and rural areas can be reduced only by well-organized regional plans. The more highly specialized programs at the hub serve the periphery in consultation, in recommendations of plans of care for individual patients, in selective periodic reassessment of the progress of children, and in furnishing certain types of care directly.

No matter how well developed a regional program may be, it cannot bring the ultimate in daily services to the single family living far off in the hinterland. At some point, a social decision must be made that it is too costly to try to do this. Such a family must decide for itself whether the needs of its handicapped child warrant the family's making a major move to a more accessible location.

Certain inequities in geographic coverage by services for handicapped children which exist in parts of the country cannot be attributed to urban-rural factors alone. Quixotic spottiness occurs because of vagaries of interest on the part of the public, agencies, professions or officials. Unfortunately, the presence of services is usually appreciated; their absence commonly goes unrecognized. Though local interest is vital and should be nurtured, planning at a more central level is essential. Someone has to look for and call attention to the areas where vacuums exist.

Adequacy of components of rehabilitation

Since many agencies, especially voluntary ones, choose their program focus or emphasis on the basis of original charter or bequest or because of particularized interest of their board members, there is no assurance of evenness in development of the various components of service for handicapped children. This constitutes another cogent argument for coordinated community planning. Greater success in approximating the desired variety of services in the community blueprint is likely of attainment if a flexible attitude exists concerning admission of patients for one or another type of treatment without admitting the patient to the service as a whole. This would permit the mosaic of rehabilitation services to become an actuality for children in that community.

It can be said that every family with a handicapped child is materially in need of counseling. The agony and suspense, the complexities of arrangements for care, the uncertainties of prognosis, aspirations of the parents, the difficulty of achieving a balance between giving appropriate protection and encouraging progressive self-reliance and initiative; these and more are burdens that warrant the support and guidance of an objective third party.

Ideally, it would seem that counseling should accompany and be directly associated with each service given. Not only may this not always be feasible, but it could distribute the task so widely that few professional persons would acquire the profound understanding that comes from concentration upon a narrower rather than broader class of clientele. Consideration, therefore, might be given to the establishment in any agency of a counseling service available as well to patients of private physicians or other agencies and institutions in the community or the surrounding territory. This would call for extremely close communication between the counseling service and the treating agent so that contradictory advice would be avoided and complementary effect from the two services would ensue.

Another great advantage that could accrue from a central counseling service is the opportunity that would exist for group methods. The larger number of referred families would permit organizing discussion groups of parents by homogeneity of diagnosis, age, type of problem or other particular concern. Groups for older children, with or without parental participation, could also be set up. Continuity of group interaction over periods of time can result in tremendous support to the members of the group. Support gives courage to face difficulties, willingness to accept disappointment, readiness to cooperate in therapy and insight into one's own emotional reactions.

The community self-evaluations in the Georgia study demonstrated the presence of four types of inadequacy or incompleteness of community services for handicapped children. These might be characterized as geographic, diagnostic, economic and educational barriers in the sense that these types of considerations militated against either the full development of services or their utilization even when present. Implications for correction are obvious.

Case finding

No attempt was made in the Georgia study to assess the various methods of case finding that are used in different parts of the country. Comment here will be limited to the family inquiry technique. The conclusion is drawn from the Georgia experience that properly selected questions presented to the mother at specific ages of her children can elicit clues to the large majority of children who have developed overt symptoms of certain types of handicaps. Methods need to be tested in the field whereby families would be approached on the basis of the age of a child or at the time of attendance at some community program, such as a school or a child health conference. For example, key questions at one year of age could identify gross abnormalities in growth and development; at three years of age in speech, locomotion and socialization; at six years of age in intelligence and visual acuity. Methods of inquiry need to be refined by repeated testing and evaluation. Nevertheless, the Georgia study demonstrated the striking non-specific usefulness of certain questions in finding handicapped children, although not necessarily with the same condition as anticipated.

At what age in childhood is it reasonable to expect to recognize or to suspect the different types of handicap? Closely tied to this question is another one. At what age does it matter that the condition be recognized? The latter question is predicated on giving full consideration to the pros and cons of parents being informed as soon after birth as possible just where they stand in expectations for their child. The question is pointed, however, at what might be done most constructively at certain ages.

For the twelve conditions encompassed in the Georgia study, an over simplified age classification might be made in terms of most common time of life when a definitive diagnosis can reasonably be expected, as follows:

Cleft palate at birth.
Cosmetic disfigurements at birth or at onset.
Epilepsy at onset.
Cerebral palsy — one to two years.
Mental retardation — one to two years.
Orthopedic conditions — one to two years, or at onset.
Personality disturbance — two to three (especially early depression) and more definitely at about six years of age.
Hearing impairment — eight to fourteen months (as early as six months when gross deficit exists).
Speech defect — at four years.
Heart condition — at two to three years (variable, depending upon the effect of the condition on the child's general activity and growth).
Eye conditions — nine months of age for strabismus, three years of age for gross vision defect or later in childhood, if onset occurs later.
Orthodontic conditions — six to ten years.

Two levels of case finding.

The community blueprint indicated that there were two levels of case finding. One is the common understanding of the term, which for the professional agency or worker means to find or learn about a handicapped child not previously under care. The second is the identification of unmet needs of known cases. This is "case finding" in the truest sense. How one goes about identifying such unmet needs among known cases is a difficult question which will be discussed in the next section on the subject of registries.

Registries

Several types of registries of handicapped children exist. The different purposes of each determine the types of information kept and the methods of maintenance of the registry files. Three types of registries might be named, as follows:

1) The agency service registry.
2) The community service registry.
3) The central statistical registry.

The agency service registry

An agency service registry, as the name implies, is merely a mechanism for keeping track of the agency's own operations and for rendering service to its clientele. It makes no pretense at assessing or trying to meet community needs. It is an internal administrative device. What information is kept depends on the needs of the particular agency.

The community service registry

A community service registry is usually maintained by a coordinating type of agency, such as a health department or health council. The major purposes are to achieve for each child—

1) Continuity of supervision during the years of childhood, and
2) Comprehensiveness of components of rehabilitation.

The coordinating agency may or may not give direct care of one type or another. It tries to marshall the resources of the community to be brought to bear in the child's care and to see that the family does not fall between the discrete segments of program coverage of the various private and public, individual practitioner and agency treatment agents.

1) For coordination and continuity alone, the community service registry need not contain full clinical information about each case. What should be known is whether or not the child is under responsible professional supervision. Efforts that have been made in different parts of the country to maintain up-to-date central registries with details about clinical progress and treatment activity have almost invariably broken down because of the burden of paper work placed on all parties. Instead, the registry should have information on the gross category of rehabilitation being rendered (e.g. vocational counseling) and should call for reports from treating agencies only

when there is a *change* in attendance status of a child, as follows:

- a) New admissions.
- b) Terminations.
- c) "Lost cases." A "lost" case is so defined only after the treating agent has exhausted its own customary efforts at renewing contact with the family. The coordinating agency does not take over the usual follow-up responsibility of the various treating agencies.

In addition to responding to reports of interruption of care, the coordinating agency must initiate some type of follow-up of its own. This may be largely in the form of sending an inquiry to the presumed treating agency asking whether or not the child is still active with that agency. If, however, such inquiries are made too frequently, they would become a nuisance. The timing of the inquiries should be determined by the probable needs of the child. Toward this end, a "follow-up timetable" should be set up for each child, in the light of information about the child's condition and anticipated critical points in his growth when important intervention (medical or other) would probably be indicated. A gross timetable pattern can be said to exist for each different diagnosis.

2) The second major objective of the coordinating agency, which is to obtain for each child comprehensiveness of rehabilitation, is a more difficult administrative problem. One method which has been used is that of having the chief components of rehabilitation represented on the staff of the agency by persons from the appropriate disciplines. The social worker or vocational counselor, for example, would review the files to uncover opportunities for rounding out the rehabilitation of the children in one or another fashion. One can readily see what a tremendous burden such multiple case review would be. This method is hardly to be recommended.

A modification of the method is to have a full team of disciplines on the staff meet frequently to hear and to pass on suggestions for supplementation of care being given to particular children. In this method, any one member of the professional team reviews a case with the contributions of the others in mind.

Since even the second method described is costly and difficult to achieve in view of the shortage of personnel, it is here suggested that a single professional person versed in the field of rehabilitation can be sensitive to gaps in care, even though the specifics of those gaps may be those of other specialties.

Moving another step toward the ideal situation, the coordinating agency would not have the need to do case reviews by any method if all the treating agencies in the community had a broad concept of the components of rehabilitation and of the ways one agency's service can be related to others.

The central statiscal registry

The central registry receives reports from the community service registries and at times directly from treating agents. Its major problem is the attainment of an unduplicated count of handicapped children in its geographic jurisdiction, such as a state. Toward that end, it should obtain sufficient identifying and demographic information to separate one case from another. Beyond this, it would be desirable to have information for classification of the handicapped children in a number of ways, such as —

Diagnoses.
Disabilities and severity of involvement.
Probable age of onset.
Age at which diagnosis was first made.
Age of onset of medical care for the condition.
Presently under care.

The statistical registry can be kept up-to-date only if terminated cases are removed from the files. Causes of termination are —

No longer handicapped.
Moved out of the area.
Death.
Reached adulthood. (The advantages of combining rehabilitation of children and adults may warrant a common registry for all age groups.)

Reporting of handicaps

It is an old and cardinal rule that reporting of any health condition should not be required unless a reasonable amount of service of one kind or another will be given in response to some of the reporting. Statistical compilation alone is seldom an adequate justification for requiring reporting.

In oversimplified fashion, reporting might be divided into lay and professional reporting. The former applies to conditions whose presence might be made a matter of strong suspicion to health workers by obtaining answers to certain selected questions. The latter is more likely to apply to conditions which would not be identified by questions and answers but need some type of objective screening. Examples of the former, the group identifiable by questionnaire, are mental retardation and emotional disturbance. Examples of the latter, identifiable by objective screening, are vision and hearing impairment. The twelve handicapping conditions included in the study might be characterized as follows: Cerebral palsy — The more severe types are referred by the parents, the milder kind may be identifiable by questionnaire given to parents or to other child caretakers. Cleft palate — This is usually obvious and gross and referred by parents if not identified by physicians at the time of the routine examination of the newborn infant. Occasionally, when the lip is not involved, the palate may be missed, but regurgitation of food by the baby and later the development of abnormal speech usually leads to referral. Cosmetic defects — Reporting of these conditions depends upon the values and importance placed upon them in the social group. A questionnaire may elicit previously unreported cases from parents and child caretakers. Personality disorder — Questionnaire may be very useful, both among parents and child caretakers, here again depending upon the definition and the objective of the reporting program. The questionnaire may be particularly contributory in eliciting information or drawing attention to the withdrawn child who is non-aggressive and in whose case the absence of anti-social behavior of a hostile nature may lessen the level of concern of family and others. Difficulty in adjusting to school or unusual fear of school attendance may be symptoms which would cause school personnel to report such children. Epilepsy — It is usually self-referred by parents. Eye and hearing conditions — Periodic vision and hearing tests are the only presently reliable mechanisms for case findings. Optimum periodicity and methods of screening at different ages are not yet fully determined. Heart conditions — No outstandingly reliable case finding methods can be advanced to constitute basis for reporting. Questionnaire would have high over-referral. Periodic medical examination is costly and not too helpful. Mental retardation — Questionnaire may be helpful both with parents and child caretakers. Parents make self-referrals when they have opportunity to compare a child with siblings. Orthodontic conditions — Self-referral usually depends on the socio-economic level and availability of service, but also on the family's or community's sense of value or definition of what constitutes a cosmetically disturbing tooth irregularity. However, since many children who need orthodontic correction do not have gross or overt cosmetic distortion, screening becomes a professional matter. It is suggested that a dental inspection at about ten years of age be done as much for orthodontic as general dental needs. This, of course, presumes the presence of available orthodontic corrective programs. Orthopedic conditions — Usually have family self-referral because of disturbance in gait or use of the extremities. Probably the most important single orthopedic condition which escapes referral is scoliosis. Speech defects — It would be desirable if suitable methods could be developed for speech screening at three or four years of age. In the absence of this, this should be done at the time of entering school. Referral by parents is not too useful because on the one hand many conditions are accepted and on the other hand temporary unimportant ones cause excessive concern.

In summary, if community voluntary reporting is to be considered, it is most likely to be useful for cerebral palsy, some cosmetic conditions, emotional disturbance and mental retardation. Specific screening devices would be preferable for vision and hearing, speech and orthodontic conditions. Other conditions, such as cleft palate, epilepsy, heart and orthopedic conditions are not likely to produce a very high yield of previously unknown cases by any method of screening and reporting.

In addition to an on-going program of case finding and reporting, there is occasional justification for a community-wide short-term intensive campaign, such as was conducted in the Georgia study. A campaign may be indicated for research or survey in the absence of otherwise available data. In addition, the involvement of the community has an educational effect. It is not recommended, however, whether for research, survey or public education or all three, that a community campaign should be lightly undertaken.

Organization of diagnostic clinics

The experience in the Georgia study underlines very strongly the many advantages that accrue from the team conference at clinics. Although the procedure is time-consuming at the moment, much time is often saved in the end. Of greater importance than the time factor is the mutual education that takes place among the professional team members and the changes that ensue, not only in consideration of the other needs of the children but in the very core of philosophy of each one's scientific decisions. The neurologist treating the epileptic child is no longer satisfied merely because seizures are controlled, as long as the child is not accepted in school because of the stigma of epilepsy excludes him.

Over and beyond the obvious contributions made by each different professional discipline, several aspects deserve mention here. The pediatrician should be a routine member of every team, regardless of the diagnosis under focus. He should make a thorough general pediatric examination of each child before the more specialized assessments are made. The public health nurse and social worker should both have an opportunity to make personal contact with every family, not merely on a referral basis. There is no family of a handicapped child who does not need the services of both. Attention is here called to the method of social work interview practiced in the Georgia study. A structured time-limited interview was found to be acceptable and useful in the hands of experienced social workers.

When personnel travel time is appreciable, a whole day should be used rather than half a day. With greater distances, a succession of days are preferable if the caseload warrants.

In a full day clinic, staff conferences should be held twice a day, with each patient scheduled to remain either through the morning or afternoon rather than the entire day.

Rather than offering rigid conclusions on exact patterns of clinic organization, the experiences presented in Appendix M lend themselves to adaptation to the differing needs of different situations. Types of interacting modifications include numbers of patients scheduled related to hours of clinic and numbers of professional persons related to length of time spent by each. A major consideration is the proportion of new patients being seen for the first time. Impressions for each diagnostic category are given below.

Cleft Palate

Fifteen patients can be handled in a six-hour clinic. At least half the time should be given to the staff conference because most patients involve so many members of the professional team, and because some are examining the patients for the first time. If a hearing defect exists more time will be required.

Cosmetic

Fifteen patients can be handled in a six-hour clinic. Although the plastic surgeon averaged only five minutes per patient when he examined them separately, this amount of time would have extended the conference unduly if he had not seen the patients beforehand. The rapid processing of patients in the conference was probably due to the presence of a number of minor cosmetic conditions. For this reason, it is suggested that the number be kept down to 15 if a fair degree of complexity is expected among the patients.

Dento-facial

Not many more than 15 cases can be handled reasonably well in a six-hour clinic. Our staff worked almost a 12-hour day to handle 26 patients. It is particularly important that enough time is allowed for the social work interview.

Eye

It would seem reasonable to schedule 40 patients for a six-hour clinic. This group tends to have a higher proportion of over-referral (false positives) than most diagnostic categories. The pediatrician saw all patients and screened out those who did not need to be seen by the ophthalmologist. Similarly, children were not tested for visual acuity unless definite indication existed. The clinic was not attempting to meet routine needs of all children. The average of 10 minutes per child required to test vision was in part due to having some young children and some with mental retardation. Staff conference time would be expected to be shorter than for other diagnostic groups. Psychologists were placed on this clinic team because of the expected association of neuro-psychologic manifestations in some of the children.

Personality Disturbance

Again, clear distinction must be made between the purposes of a typical child guidance clinic and a classification clinic such as for a survey. Even for the latter purpose, however, the Georgia experience suggested need for more time than was planned for the social workers' and psychologists' interviews. Since the psychiatrist obtains his information at the staff conference, sufficient time for summarized presentation and discussion must be set aside. For this reason, the clinic was designed so that the staff could divide into two teams for separate concurrent conferences. This would have allowed more opportunity for deliberation than was taken. It is suggested that a team composed of a pediatrician, psychologist, psychiatrist and two social workers could handle 10 cases in a five-to-six hour clinic.

Epilepsy

The neurologists preferred to see the patients before the staff conference and averaged almost 20 minutes per case. Most of the staff found the individual examinations of this diagnostic group particularly time-consuming. The staff conference seemed relatively hurried, in view of the considerable amount of exchange that was occasioned on the psychologic, economic, educational and vocational aspects as well as the organic and drug therapy features. With a single neurologist on the team, 15 patients would require almost a seven-hour clinic. If possible, it would seem preferable to have two teams and to keep the total number below 20.

Heart

The social workers saw all cases, even when no cardiac abnormality was found. Since all these children were reported as possible "heart cases," it was particularly important to assess the extent of inappropriate anxiety in the family and threat of unnecessary invalidism. This type of clinic called for more laboratory work than most of the others. The technician was kept on duty throughout the staff conference and certain patients were asked to remain for the full day because additional laboratory work was sometimes requested after group discussion. These patients were placed first on the conference agenda. The cardiologists averaged about 15 minutes per patient, partially because they did the fluoroscopic examinations that were called for in about one-sixth of the cases. Not more than 15 cases can be seen and discussed satisfactorily in a six-hour clinic.

Mental Retardation

Fifteen to 18 patients can be handled in a six-hour clinic. The pediatricians required 15 to 25 minutes per patient rather than the 10 minutes estimated in advance. The greater difficulty working with this type of child and the frequent presence or suspicion of the existence of physical pathology contributed to this prolongation. The social workers found these cases particularly time-consuming and did not get to see all the patients for this reason. The ratio of numbers of social workers to other staff should be higher. The psychologists required less time than anticipated because the focus was more obviously narrowed down toward psychometry than was the experience with the other diagnostic categories. The speech therapist examined almost all the cases and found it a heavy task to do this alone.

Orthopedic and Cerebral Palsy

Obviously, it would be preferable to see "bone and joint" cases as a separate orthopedic clinic. When, however, adequate advance screening or referral is not available to distinguish these from neuromuscular problems, the time the orthopedist and neurologist spend together offers many advantages. They found the experience stimulating and rewarding, though it is not expected that continuing the practice would occur spontaneously. It has to be organized. The physical therapists were satisfied to do their appraisals together with the two physicians, but would of course have to make a detailed muscle analysis separately prior to establishing a specific plan of therapy. The psychologists required 35 to 50 minutes per patient and saw as many cases as time permitted in advance of the staff conferences. The difficulty of assessing children with communicative disorders is well known. The ratio of psychologists to other staff should be high enough to allow for careful work. Not more than 15 patients should be seen in a six-hour clinic.

Speech and Hearing

In a classification clinic, it was necessary to combine speech and hearing referrals. Under other circumstances of referral, they might be separated. In the staff conference, it is possible to separate the cases so that the otologist (and audiologist, if available) does not have to sit through irrelevant discussion. With such separation, a staff of one audiometric technician and one otologist with two or more of each of the other disciplines could handle 20 to 25 cases in a seven-hour clinic. With only one representative of each discipline, eight to 10 cases would require six or seven hours.

Socio-economic factors

The possible increased frequency of occurrence of handicaps among relatives of handicapped persons suggest the desirability of an epidemiologic family approach in the search for cases. It is particularly important that a complete history of previous pregnancies of mothers of handicapped children be obtained. The repetition of unfavorable outcome of pregnancy among a group of "vulnerable" women has been well recorded. Preventive inter-conceptional and prenatal care for these women may give large returns with a relatively focused and small effort. When it is known that there have been complications of the prenatal period, delivery, postnatal or neonatal period, more intensive and continuous follow-up observation of mother and child is warranted. When routine maternity care cannot be offered in all instances, such women should be given priority in establishment of case load. The follow-up of small premature infants should be specialized, continuous and pointed toward the early identification of abnormalities that commonly occur among such infants.

Although the Georgia study failed to demonstrate a striking association between socio-economic family status and the occurrence of handicapping conditions among the children, the impression was gained that certain conditions did have such an association. These were cerebral palsy, mental retardation and epilepsy. Further epidemiologic studies need to be done to confirm or disprove this connection and to analyze the possible mechanisms that may exist.

Community self-evaluations

With the help of guides, such as the blueprints developed in the Georgia study, citizens, both lay and professional, can be helped and motivated toward making assessments of the quantitative adequacy of their community's program for handicapped children. The nature of their findings constitutes the basis for community action for improvement of the program. The occasion for communication between professional and lay persons that is created during the self-evaluation process has a salutary effect on both groups. The joint effect is more effective in influencing legislative bodies and government officials than separate efforts.

APPENDIX A

Participating Individuals, Organizations and Agencies

Not the least value and significance of this study to Georgia is the cooperative spirit and contributions of many individuals, organizations and agencies who participated in developing the concepts expressed in this report.

At the initial meeting of the Advisory Committee, the Chairman stated that because of a common interest in a common problem people from the fields of Public Education, Public Welfare, Public Health, the field of private charity, and the field of private enterprise, as well as individual citizens, want to know how to correlate efforts for the best services for handicapped children.

In addition to the members of the Advisory Committee, professional and lay people participated in innumerable conferences in the development of blueprints for individual diagnosis, community orientation and organization for the quantification study, volunteer lay and professional services for twenty-five days of appraisal clinics.

Of special significance is the extensive participation and support given by the Georgia Department of Public Health in generously making available key personnel, office equipment and supplies.

Emory University Medical School, Medical College of Georgia, University of Georgia, The Medical Association of Georgia, gave freely of advice, counsel and assistance in selecting and securing medical personnel.

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Miss Edwina Davis, Medical & Science
Reporter, The Atlanta Journal

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Mr. Otis Dyer, Supv. Counsellors
Atlanta Area Office
State Vocational Rehabilitation

Mrs. Florine J. Ellis, President
Georgia Mental Health Association

Mr. Norman E. Elsas, Board Member
Georgia Society for Crippled Children & Adults, Inc.

Mr. Edgar P. Eyler, Vice President
Georgia Society for Crippled Children & Adults, Inc.

Mr. John D. Faver
Ga. Elks' Association

Mrs. John D. Faver
Cerebral Palsy Society of Georgia, Inc.

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Georgia Light House for the Blind

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The Variety Club of Atlanta

Mr. Dwight Furguson
Regional Child Welfare Consultant
U. S. Children's Bureau

Mrs. R. E. Gatchell
The Gatchell School for Cerebral Palsy

Hon. Marvin Griffin
Lt. Governor of Georgia

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Committee on Care of Mentally Retarded Children
Community Planning Council, Inc.

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State Department of Health

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Dr. Mamie Jones, Consultant
Education for Exceptional Children
State Department of Education

Dr. G. Lombard Kelley, President
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Dr. Robert Kelly, Orthopedist
Emory University Hospital

Judge Allen Kemper, Director
Department of Public Welfare

Dr. Lou Kennedy
Speech Pathologist

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Scottish Rite Hospital

Hon. Edgar M. Lancaster, Senator

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The Cerebral Palsy School-Clinic of Atlanta, Inc.

Miss Eileen E. Lester
Regional Medical Social Consultant
U. S. Children's Bureau

Rev. Cornelius L. Maloney
Supt. Diocesan Schools of Georgia

Mrs. Mary Wiley McCarty, President
Jr. League School of Speech Correction

Mrs. W. W. McNeal, President
Atlanta Mental Hygiene Society

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Department of Pediatrics
Medical College of Georgia

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State Department of Public Welfare

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State Department of Public Health

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Georgia Education Association

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Thomasville, Georgia
Dr. William Smith, Neuroligist
Mr. George Stewart
Attorney at Law
Hon. Frank Thomas, Chairman
Decatur Board of Education
Hon. B. E. Thrasher, Jr., Auditor
State of Georgia
Dr. Herman L. Turner, President
Georgia Society for Crippled Children & Adults, Inc.
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Savannah, Georgia
Dr. T. P. Waring, Orthopedist
Savannah, Georgia
Miss Mary Webb, Executive Director
Georgia Society for Crippled Children & Adults, Inc.
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Dr. Carl Whitaker, Director
Department of Psychiatry
Mr. Robert Whitaker, Assistant Director
10-Year Plan of Development
Emory University
Hon. George P. Whitman, Jr., Chairman
State Board of Education
Mr. R. B. Wilby, Director
The Variety Club of Atlanta
Mrs. Clarke J. Williamson
Educational Director
The Cerebral Palsy School-Clinic of Atlanta, Inc.
Dr. R. Hugh Wood, Dean
Emory University School of Medicine
Dr. Peter B. Wright, President-Elect
Medical Association of Georgia

QUANTIFICATION STUDY—Clarke and Oconee Counties

Preparation of Community

Athens-Clarke County Health Department

Dr. Wedford W. Brown, Commissioner
Office space for six months and space for the 25 days of appraisal clinics. Cooperation of entire staff. Office furniture.

Georgia Department of Public Health — Key Personnel:

Mr. Frank H. Morrison — Six months service as Administrative Assistant and Coordinator.
Miss Hannah Mitchell — Administrative assistance in planning and setting up clinics.
Mr. H. Bradley Wells — Statistician — reporting service.
Mrs. Dorothy Conroy and staff of Crippled Children's Division — Development of plans for registry and clinic direction.
Office equipment: 2 desks, typewriter, files and general supplies.

Regional Office Georgia Department of Public Health

Dr. W. B. Harrison, Regional Medical Director and staff.

Oconee County Department of Health

Mrs. Carrie W. Marsh, PHN

Mayor Jack Wells and Athens City Council

Crawford W. Long Medical Society

Mrs. Paul Pfuetze, Director of Community Organization

Local Civic Organizations

Served as Community sponsors and provided an average of twelve volunteer staff assistants for each of the 25 clinics.

University of Georgia

Dyer Massey, Public Relations Director - Publicity Chairman
Bureau of Research, College of Education, developed the house-to-house canvass.
Dr. John A. Dotson, Dean
Dr. Ira E. Aaron, Director
Dr. Joe C. Bledsoe
Mr. Chester Travelstead
Dr. B. O. Williams, Sociology Department

Dr. A. L. Finkner, Professor of Statistics, North Carolina State College

Mrs. Frances Weatherford, Visiting Teacher, Oconee County

QUANTIFICATION STUDY—Clarke and Oconee Counties

Appraisal Clinics — Professional Personnel

PUBLIC HEALTH NURSES

Miss Katharine Akin — Ga. Department of Public Health
Miss Hannah Mitchell — Ga. Department of Public Health
Mrs. Dorothy Conroy — Ga. Department of Public Health

MEDICAL SOCIAL WORKERS

Mrs. Mary W. Collier — Ga. Department of Health
Miss Patricia Stodghill — Ga. Department of Health
Miss Augusta Montague — Ga. Department of Health
Miss Margaret Graham — Fulton County Department of Health
Miss Eileen Lester — U. S. Children's Bureau

PSYCHOLOGISTS

Mr. William Rhodes — Georgia Department of Public Health
Dr. Eme Liza Swain — University of Georgia
Dr. Hudson Jost — University of Georgia
Dr. A. S. Edwards — University of Georgia
Miss Frances Ross — Atlanta Jr. League Speech School
Dr. Florence Young — University of Georgia
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Dr. John A. Broxson — Atlanta
Dr. Leopold Winter — Augusta
Dr. R. T. Osborne — University of Georgia
Miss Wilma Sanders — University of Georgia
Mr. Frank Powell — University of Georgia
Dr. W. T. James — University of Georgia
Dr. Clarence Simon — Atlanta Jr. League Speech School
Dr. Herman Martin — Emory University
Dr. Tom Gilbert — University of Georgia
Dr. Richard Goodling — Emory University
Dr. John Muthard — Emory University
Dr. Grace Marie Freyman — Warm Springs Foundation
Dr. James Greene — University of Georgia
Dr. Robert M. Hughes — Atlanta

NEUROLOGISTS

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Dr. L. O. Manganiello — Medical College of Georgia

NEUROSURGEONS

Dr. Donald Bickers — Atlanta
Dr. Robert Mabon — Atlanta
Dr. Robert A. Sears — Atlanta

CARDIOLOGISTS

Dr. Calhoun Withim — Medical College of Georgia
Dr. Willis Hurst — Emory University

PLASTIC SURGEONS

Dr. Charles Yarn — Atlanta

OTOLOGISTS

Dr. Lester Brown — Atlanta
Dr. J. Gordon Brackett — Atlanta
Dr. Nathan Gershon — Atlanta
Dr. William R. Fisher — Atlanta
Dr. James King — Atlanta

PROTHODONTISTS

Dr. Willard Hunnicutt — Atlanta

ORTHODONTISTS

Dr. Herbert Jaynes — Atlanta
Dr. Charles H. Smith — Atlanta

CARDIOMETRIC TECHNICIANS

Miss Betty Kimball
Miss Hazel Gardiner

SPEECH THERAPISTS

Dr. Stanley Ainsworth — University of Georgia
Mrs. Kay Wall — Atlanta Jr. League Speech School
Mrs. Louise Davidson — Davidson School of Speech Correction
Miss Sue Craig — Paine College, Augusta
Miss Doris Campbell — Atlanta Jr. League Speech School
Miss Rita Cleary — Athens School for Handicapped Children

PHYSICAL THERAPISTS

Mrs. Nadylis Wood — Athens School for Handicapped Children
Miss Eleanor Stout — Georgia Department of Public Health

PEDIATRICIANS

Dr. Roger Dickson — Atlanta
Dr. Mack Sutton — Albany
Dr. Philip Mulherin — Augusta
Dr. Lee Bivings — Atlanta
Dr. John Walker — Atlanta
Dr. David S. McKee — Atlanta
Dr. Carey Sullivan — Atlanta
Dr. William G. Brawley — Decatur
Dr. J. W. Bennett — Medical College of Georgia
Dr. Harold Muecke — Waycross
Dr. Olin Shivers — Atlanta
Dr. Margaret Green — Atlanta
Dr. Katherine Edwards — Decatur
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Dr. Ben Gilbert — Gainesville
Dr. Joseph S. Patterson — Atlanta
Dr. Dixon Fowler — Atlanta
Dr. Ralph L. Robinson — Atlanta
Dr. Albert Rosenberg — Atlanta
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Dr. J. L. Chandler — Medical College of Georgia
Dr. Richard C. King — Atlanta

LABORATORY TECHNICIANS

Mr. Alton Croft

OPTHALMOLOGISTS

Dr. Tom Meissner — Atlanta
Dr. Robert W. McAllister — Macon
Dr. John C. Howard — Athens

PSYCHIATRISTS

Dr. Thomas P. Malone — Atlanta

APPENDIX B

Definitions of the Twelve Handicapping Conditions

Cerebral palsy: Children from birth to 21 years of age who have a motor disturbance of the body apparently due to a previous and reasonably static type of damage of the central nervous system above the level of the spinal cord. (This excluded neoplasms and progressive degenerative conditions.)

Cleft palate or lip: Children from birth to 21 years of age who have an appreciable cleft of palate or lip; or a significant sequela of a treated cleft.

Cosmetic defect: Children from birth to 21 years of age who have an abnormal and unsightly appearance of the usually exposed parts of the body, especially the face. (This included) strabismus and externally obvious orthodontic distortions of the face.)

Epilepsy: Children under 21 years of age who suffer from recurrent convulsions or related episodes; or who have had a number of convulsions that are believed to be more than the common febrile reactions of early childhood or the transient symptoms of an acute infection or injury. (This included a variety of convulsive disorders in addition to so-called idiopathic epilepsy.)

Eye abnormality or impairment of vision: Children under 21 years of age who have significant abnormality of structure, position or function of eyelid or any part of the eyeball; or who have a distance visual acuity when corrected of 20/40 or worse in the better eye demonstrable by the Snellen illiterate E chart under controlled lighting. (If the better eye had a corrected distance visual acuity of 20/30 or better, the child was considered handicapped *only* if the other eye was severely affected by a condition that had potential for involvement of the unaffected or less affected eye.)

Hearing impairments Children under 21 years of age who have 25 or more decibels of functional hearing loss (using both ears) in the frequencies 500 to 2,000 demonstrable by individual pure-tone audiometric examination; or who have obvious gross hearing impairment (e.g. infants).

Heart abnormality or rheumatic fever: Children from birth to 21 years of age who have congenital or acquired structural or functional abnormality of the heart or blood vessels; or who have had one or more definite and medically diagnosed attacks of rheumatic fever.

Mental retardation: Children under 21 years of age who have an IQ below 70 by psychometric test; or its equivalent; or who very early in childhood show gross delay in development which is believed to be due, at least in part, to mental factors.

Orthodontic abnormality: Children under 21 years of age who have significant malocclusion of the permanent teeth; or who have other gross abnormality of structure or appearance of the jaw or teeth. (This excluded dental disease and cleft palate if secondary malocclusion was not present.)

Orthopedic or neuromuscular disturbance: Children from birth to 21 years of age who have abnormality of structure or function of the bones, joints or muscles. (This included most neuromuscular conditions other than cerebral palsy as defined above.)

Personality disorder: Children eight to 21 years of age who show gross deviations in personal behavior or social relationships. (Some children under eight years were included if they showed personality disturbances associated with and often secondary to physical or mental abnormalities.)

Speech impairment: Children from five to 21 years of age who show definite abnormality in development, fluency or clarity of speech; or younger children who have gross speech disturbance from organic cause, such as cleft palate.

APPENDIX C

A Summary of Legislative Recommendations Proposed in 1953

I. Improve the facilities for mentally deficient persons at Gracewood and develop a facility for Negroes.

II. Adopt program proposed and budget requested by the State Department of Public Health which will provide:

  A. Increased clinic service.

  B. Scholarships for training needed professional personnel.

  C. Medical services needed in the program of education for exceptional children.

III. Adopt program for education of exceptional children as proposed by the State Department of Education and included in budget request.

IV. Appropriate adequate funds for the Board of Regents to provide:

  A. A sequence of courses on exceptional children in the basic curriculum of State teacher training schools to train needed teachers.

  B. A graduate program in the education of exceptional children at the University of Georgia.

V. Develop a facility for the institutional care of persons not mentally deficient but who have severe physical disability.

APPENDIX D

Counties in Which Self-evaluations Were Done

Group A (Counties with a large urban community — more than 70,000 population)

Counties		Cities	
Bibb	136,900	Macon	78,400
Chatham	171,600	Savannah	134,400
Fulton	553,000	East Point	26,500
and		and	
DeKalb	186,800	Hapeville	10,800
Muscogee	137,000	Atlanta	450,000
Richmond	149,000	Columbus	96,100
		Augusta	95,300

Group B (Counties with a smaller urban community — 10,000 to 40,000 population)

Counties		Cities	
Clarke	41,500	Athens	32,900
Cobb	78,800	Marietta	29,800
Dough[illegible]	52,000	Albany	38,700
Floyd	66,100	Rome	32,600

Group C (Rural Counties)

Atkinson	7,500	
Carroll	34,300	
Coffee	25,600	
Haralson	14,900	
Total:	1,655,000	(43.6 per cent of population of the State)

APPENDIX E

Clarke and Oconee Counties

Clarke County is located in Northeast Georgia, Athens, the county seat is 70 miles from Atlanta. The county has a population of 36,550 of which 27.2 is non-white.

It is a part of the Piedmont Plateau with much red clay soil. There are 125 square miles in the county, with 292 persons per square mile. According to the 1954 Census of Agriculture, the land area was 80,000 acres. Only 2,620 — 1,491 white and 1,129 non-white were on farms.

The location of the University of Georgia, in Athens, the county seat, is a cultural as well as economic asset.

Because there is a natural water system with an extensive flow of rivers and streams at all seasons many small and a number of not-so-small manufacturing plants provide year-round employment. Eighteen point two per cent of the people are employed in industry and only 5.7 in agriculture.

The median income of the 8,420 families is 2,208 per year and 11% of the families have an income of $5,000 and over.

Because of the University and the concentration of population the trading area of Athens has a radius of approximately forty miles.

The two hospitals in Clarke County are both in Athens. The nearness of Athens to Atlanta indicates the use of Atlanta's hospital for special medical referrals.

The local health department has a physician as commissioner of health, four public health nurses, a bacteriologist in the laboratory, a dairy and food inspector, a sanitary inspector, a public health engineer, a rabies enforcement officer and a clerical staff.

Of the 1354 births in Clarke County in 1954, 1,311 of them were hospital deliveries and 43 home deliveries. The per capita expenditure for indigent hospitalization was $.97.

Oconee County, which borders Clarke County in northeast Georgia, is a rural county, with a population of 7,009, with 38 persons per square mile, while the adjoining Clarke County has 292 persons per square mile.

Oconee is a part of the Piedmont Plateau, on the watershed between the Apalachee and Oconee rivers.

Its area of 119,040 acres is chiefly sandy loam. Over four-fifths of this area is composed of 818 farms which average 119 acres in size. Although growing livestock is on the increase, cotton, small grain and corn are the chief crops.

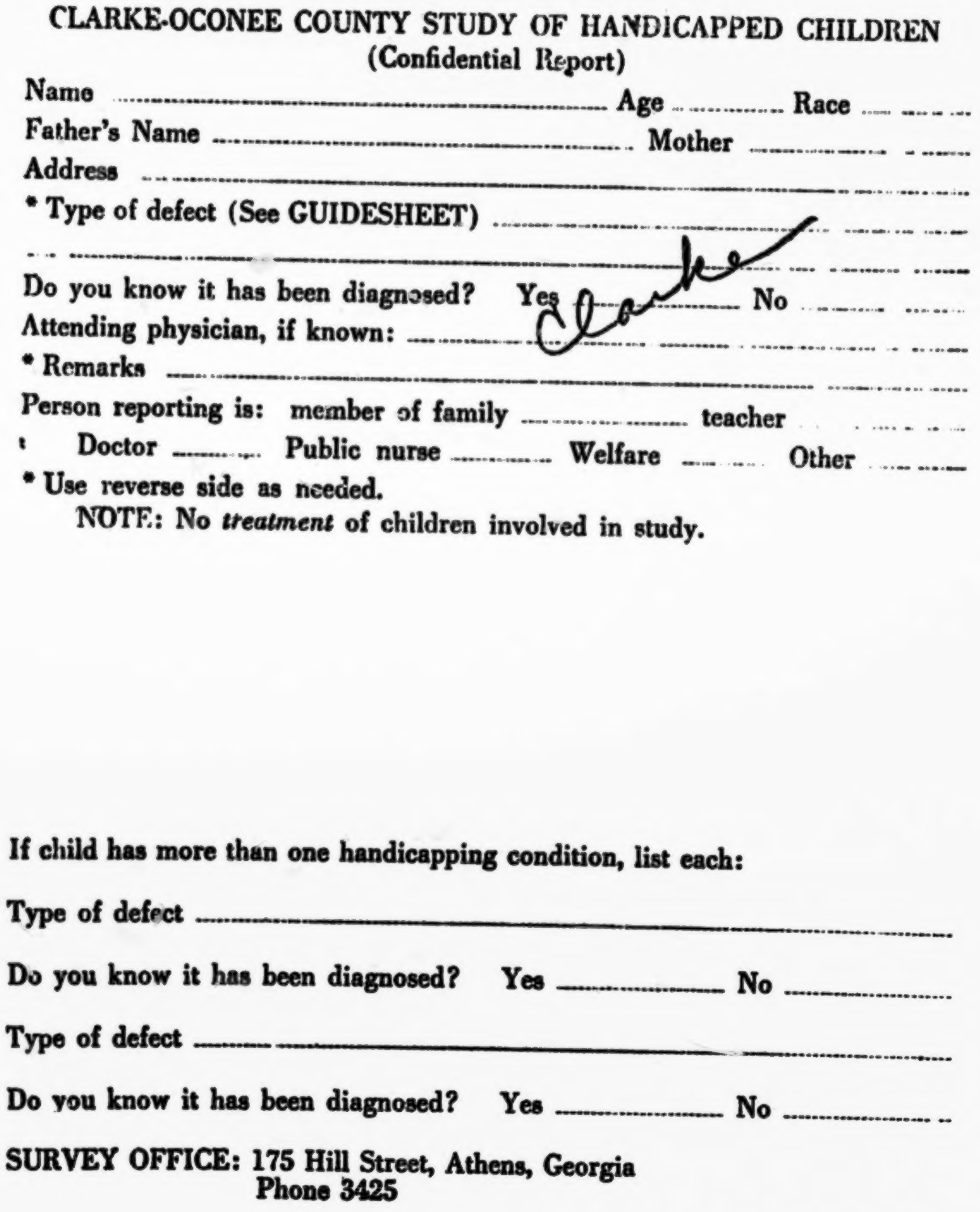
In 1954, the median income per family was $1,072 per year. Only 3% of the 1,565 families had an income of $5,000 or more.

The local health department, in Watkinsville, employed one public health nurse, under the supervision of the Northeastern Regional Medical Director and Consultant Nurse.

The per capita expenditure for indigent hospitalization was $.13.

Appendix F

Questions Used In Voluntary Reporting



CLARKE-OCONEE COUNTY STUDY OF HANDICAPPED CHILDREN
(Confidential Report)

Name .... Age .... Race ....
Father's Name .... Mother ....
Address ....
*** Type of defect (See GUIDESHEET) ....**
..
Do you know it has been diagnosed? Yes .... No ....
Clarke
Attending physician, if known: ....
*** Remarks ....**
Person reporting is: member of family .... teacher ....
Doctor .... Public nurse .... Welfare .... Other ....
*** Use reverse side as needed.**
NOTE: No *treatment* of children involved in study.

If child has more than one handicapping condition, list each:

Type of defect ....

Do you know it has been diagnosed? Yes .... No ....

Type of defect ....

Do you know it has been diagnosed? Yes .... No ....

SURVEY OFFICE: 175 Hill Street, Athens, Georgia
Phone 3425

APPENDIX G

Combinations of Sources of Voluntary Reporting -- By Presumptive Diagnoses

	No. of children	Cerebral palsy	Cleft palate	Cosmetic	Emotional disturb.	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech	No. of presumptive diagnoses
Number of children	1252	38	19	31	29	29	448	245	63	194	20	132	214	XXX
Family only	103	4	2	5	0	2	30	15	11	11	10	19	16	125
Medical only (M.D., R.N., C C agency, etc.)	100	7	5	4	1	6	25	8	10	7	1	38	1	113
School only	751	8	5	13	22	9	295	159	25	125	7	28	137	833
"Other" only (neighbor, etc.)	66	2	2	2	0	3	19	8	4	16	1	8	18	83
Family & Medical	10	1	1	1	0	1	1	2	2	0	0	5	3	17
Family & School	26	0	0	0	2	0	16	6	4	4	1	0	2	35
Family & "other"	10	3	0	0	0	3	1	0	0	6	0	0	5	18
Medical & School	44	7	1	3	1	3	10	7	1	5	0	15	7	60
Medical & "other"	9	3	0	0	0	0	2	0	0	1	0	7	0	13
School & "other"	12	0	1	0	1	0	2	1	1	2	0	2	4	14
Family, school & medical	7	2	1	1	1	2	2	2	1	0	0	3	6	21
Family, medical & "other"	1	0	0	1	0	0	0	0	0	0	0	0	0	1
Family, school & "other"	1	0	0	0	0	0	0	1	0	0	0	0	0	1
School, medical & "other"	5	1	1	0	0	0	0	0	1	1	0	2	2	8
Unknown	107	0	0	1	1	0	45	36	3	16	0	5	13	120 1462
All family reports	158	9	4	8	3	8	50	26	18	21	11	27	32	217
All medical reports	176	21	9	10	3	12	40	19	15	14	1	70	19	233
All school reports	849	17	8	17	27	14	325	176	32	136	8	48	156	964
All "other" reports	104	9	4	3	1	6	24	10	6	26	1	19	29	138

APPENDIX H

Method of Determining Size of Sample

Sampling Procedure for Choosing Households in the Clarke-Oconee Handicapped Children Survey

The sample size was determined subjectively on the basis of an estimate that the available interviewers could cover about 10% of the households in the two county area during the two week period. A uniform sampling rate of 10% was used in each of the three strata, which are described below. Different sampling frames were used in each stratum. However, the sample design was expected to yield 10% of the occupied dwelling units in both counties.

The three strata, sampling frames and methods of selection were as follows:

1. The *Urban* stratum consisted of the city of Athens, the county seat of Clarke county. A 1952 city directory was used to identify addresses within the city. A systematic random sample of intervals was chosen from the directory by taking every tenth pair of consecutive addresses on the same side of the street. Interviewers were instructed to collect an interview from households at the first address and at every household *between* the first address and the second address, which was called the checkpoint. No interview was taken at the second address. This sampling plan was used in order to take account of changes which had occurred from the time the city directory was prepared to the date of the survey.
2. The *Rural Place* stratum consisted of the towns of Bishop, Bogart, Eastville, Farmington, North High Shoals, Watkinsville and Whitehall. Local volunteers provided maps showing streets and location of occupied households. A systematic random sample consisting of every tenth dwelling unit was chosen and circled on the maps which were used by interviews to locate sample households.
3. The *Open Country* stratum consisted of the remainder of the area in the two counties not included in the first two strata. Area sampling units, each consisting of a cluster of households were randomly selected by the Survey Operations Unit at the University of North Carolina and clearly marked on highway maps showing the location of dwelling units. The area segments were usually bounded by natural landmarks such as roads, streams, railroads, etc. in order to facilitate identification by interviewers. Interviewers usually were instructed to collect interviews at every household for which the driveway originated from one of the boundaries of the sampling unit. In two instances, when location of definite boundaries could not be done in the office, interviewers were instructed to take interviews at every second household within a larger area which could be definitely identified on the map.

APPENDIX I

Instructions to Interviewers

BRIEFING SESSION SCHEDULE
INTERVIEWERS, CLARKE-OCONEE COUNTY STUDY

Monday Night January 11		Tuesday Morning January 12
7:15- 7:25	Importance of Total Study (Mrs. Pfeutze Place of House Sampling Visitation	9:15- 9:25
7:25- 7:30	Sampling Method Used to Select Houses (Mr. Aaron)	9:25- 9:30
7:30- 7:55	Method of Finding Houses Interviewer Is to Visit ATHENS INTERVIEWERS—Remain in Assembly Room OTHER INTERVIEWERS—Go to Room as Directed	9:30- 9:55
7:55- 8:05	How to Get Your Foot in the Door (Dr. Bledsoe) Making Contact with the Interviewee	9:55-10.05
8:05- 8:30	How to Record Information on Questionnaire How to Report and Turn in Completed Interviews (Mr. Wells)	10:05-10:30
8:30 10:10	How to Interpret Handicapping Conditions (Miss Mitchell, Mrs. Conroy, Dr. Ainsworth)	10:30-12:10
10:10-10:15	The Last Word (Mrs. Pfeutze)	12:10--12:15

Mrs. Paul Pfeutze, Athens — Local Coordinator of Clarke-Oconee County Study of Handicapped Children
Mr. Ira E. Aaron, Athens—University of Georgia
Mr. H. B. Wells, Atlanta—State Health Department
Dr. J. C. Bledsoe, Athens—University of Georgia
Mrs. Dorothy Conroy, Atlanta—State Health Department
Miss Hannah Mitchell, Atlanta—State Health Department
Dr. Stanley Ainsworth, Athens—University of Georgia

Twenty white and 10 colored interviewers were selected to do the House Sampling; 18 were used finally in the city of Athens and 3 were used in the county.

Sampling Method Used to Select Households To Be Included In Sample

The sampling home visitation is a part of the larger Clarke-Oconee County Study of Handicapped Children. The total study attempts to determine the number of Clark-Oconee County persons under 21 who have one or more of 11 handicapping conditions. The severity of the handicapping conditions of children reported and the quantity of services desirable for aiding them will be estimated.

The sampling through home visits serves the following purposes: (1) It serves as a check-up on the accuracy of the voluntary reporting. (2) By treating the results of all interviews statistically, the proportion of children under 21 in any given county of Georgia who might be suffering from any one of the 11 crippling conditions can be estimated.

This is a sampling survey. By that is meant that every house in Clarke and Oconee Counties will *not* be visited. A sample of approximately 10 per cent of the homes has been selected. The homes to be visited have been selected in accordance with scientific methods of sample selection, disregarding names of people who might be living in them, etc. Every house in the two counties has an equal chance to be included in the sample. In all cases specific houses have been designated for visitation. It is imperative that each house included in the sample for visitation be visited. Substitutes are not permitted. Houses visited will be only those so designated in your instructions. These instructions will be picked up on the day you begin your visitation or, in some cases, the afternoon before.

In Athens, specific addresses will be given. The interviewer is expected to visit specific addresses, as 104 Penny Road. A procedure has also been devised for Athens interviewers to include a sampling of new houses for which addresses are not available through the city directory. This will be explained in detail to the Athens interviewers.

In areas such as Watkinsville, Bogart, Winterville, Bishop, Farmington, North High Shoals, Eastville, and Whitehall, specific houses to be visited will be marked plainly on maps of those areas. These maps were prepared just this past week.

In open country of Clarke and Oconee Counties, interviewers will be assigned to areas which are clearly marked on maps. These maps will be given to the interviewers. The interviewer for these areas will be given specific instructions for locating houses to be visited in those areas.

Great care has been taken to make sure that households included in this sample will be representative of Clarke and Oconee Counties as a whole. Any deviation from the specific pattern set up for visitation will lessen the accuracy of the survey results. Each interviewer is urged to follow specific directions in locating households to be interviewed. Make no substitutions. Skip no households that should be interviewed. Include no houses in the sample that should not be in it. Only in this manner can the results of the sampling home visitation be considered to be accurate.

Technique of Approach
(Establishing Rapport)

Interviewers should avoid the appearance of being unduly prosperous or "overdressed"; dress should be simple, neat, and clean, and appearance pleasant. A pleasing smile is the best introduction.

Knocking on the Door or Ringing the Bell. It is suggested that this be done briefly with sufficient time allowed for the occupant to answer. Often, clues will reveal whether or not the occupants are absent or occupied in such a manner that a short time may be required to complete some task. Interviewers should avoid the appearance of impatience. It may be well to step back from the door after knocking to permit persons inside to see the interviewer. If time permits while you are waiting, record the time and number of interview. If a child answers the door, request to speak to an adult member of the household. Responsible adult members include father, mother guardian, or other adult member of the family responsible for children.

Opening Remarks. Come right to the point and save everyone's time. "Good morning (or afternoon). I'm working on a survey of crippled or handicapped children in Clarke and Oconee Counties, and I would like to get some information from you. We are visiting about one house in ten in these counties, and your house is one of those selected."

At this point, a brief pause may give the informant an opportunity to invite the interviewer in. If there is hesitancy on this point and it appears appropriate, the interviewer may add, "May I come in? It will take only a few minutes." Then proceed to the interview proper.

The more direct and simple the approach and the minimum amount of preliminary remarks are to be preferred. The few words suggested above may be sufficient in many instances. The interviewer should avoid such questions as "Are you Busy?" or "Could you spare a few minutes?" or "Would you mind answering a few questions?" since this gives too wide an opportunity for objection or refusal. If, however, these brief remarks are not enough, the interviewer may wish to go into greater detail concerning the nature of the survey, particularly the sampling home interview part. *The interviewer should not, however, make any sort of commitment of a future clinical study of a handicapped child.* To the most skeptical and as a last resort, the interviewer may need to show her letter of identification to provide authenticity.

It may be well to convince the informant that the interviewer has nothing to sell or to advertise. Interviewers may adapt their own unique patterns of gaining admittance and of establishing rapport. Once the interview proper begins, however, it is most important to ask questions *as they are worded on the schedule in the order listed,* and *without additional comment* (unless needed) in order to insure accuracy.

In cases where responsible persons in the home refuse to cooperate, the interviewer should attempt to explain the importance of getting the information in as nice a manner as possible. If the person still refuses to cooperate, then the interviewer should thank him or her kindly and leave for the next address. A note will be made of the unwillingness of the home to cooperate and will be turned in to the survey office. The central office will decide about further follow-up.

Instructions to Interviewers for Completing Interview Form For Handicapped Children Survey

1. (a) *ADDRESS TO BE VISITED:* If known, fill in the address before going to the door. For many of the households selected in areas outside of Athens the address will not be known before the interview. After you introduce yourself and explain your purpose ask for the address. *Remember, the address must be complete enough for mail to reach the home and instructions for reaching homes in rural areas must be included.* This is essential in following to get the children selected into the clinics.
   (b) *CHECKPOINT:* To be used in answering questions at end of list of symptoms. This will apply only to Athens interviews.
2. INTERVIEWER: Enter your name here.
   NO. OF CALL: Check the number of this visit and enter the date, hour, and the code result of visit as follows:
   NH—Not at home
   NRA—No responsible adult at home
   Appt—Appointment made for future interview
   Ref—Refused to cooperate
   F—Failure to locate residence

   Every effort should be made to obtain a completed interview for each dwelling unit selected in the sample. You should make three separate calls to try to get the interview. If you fail to obtain an interview because of refusal to cooperate or failure to locate the dwelling unit send in the form to the survey office with the information as to time of visit and reason for failure shown in the space provided. Enter any other remarks you feel are pertinent in the space provided at the end of the survey form and send in with that day's reports.

RACE: Do not ask this question. You must observe the race and check the appropriate box.

3. *Are there any other separate households at this address?* Check one of the boxes provided and indicate how many others there are.

   Definition: *A household includes all the persons who occupy a house, an apartment or other group of rooms, or a room that constitutes a dwelling unit.* In general a group of rooms is considered to be a dwelling unit if it has separate cooking equipment or a separate entrance; a single room occupied as separate living quarters is a dwelling unit if it has separate cooking equipment or if it is the only living quarters in the structure.

   QUASI HOUSEHOLD: Quasi household- such as boarding or rooming houses, dormitories, fraternity houses, hotels, hospitals, or jails are not considered to be a household. If one of the addresses which you visit is a quasi household it is not necessary to obtain an interview. Explain the reason for not obtaining the interview and send in the incomplete form with your completed forms of that day.

   If any of the addresses you visit are multiple dwelling units which are not indicated as such on your listing by an apartment number, a separate report must be prepared for each household at that address.

4. How many rooms are occupied by this household (excluding bathroom)? The number of rooms occupied by the household should be entered in the space provided. Halls should not be included unless they are used as a room such as bedroom or dining room, etc.

5. *Do you own or rent this home?* Check one of the boxes provided. If there is a mortgage on the house or it is being bought check "own".

6. *How many persons are in this household?* Enter total number of persons living in the household; include boarders or roomers if there are not more than five (if there are more than five boarders, the unit would be classed as a quasi household and the interview need not be completed). The form, however, should be turned in with that information given as the reason for not completing the interview.

   What are their names? List first the head of the household or the person who functions as the head. For remaining members of the household list name, relation to the head of the household, age last birthday, and sex. Be sure to circle the name of the respondent, i.e., the person giving the information. It is not necessary that the names of roomers or boarders be included in the list but a note should be made of their presence in the household.

7. *What is (Mr., Mrs.) (HEAD OF HOUSEHOLD) occupation?* Ask for the type of work which the head of the household does, such as: farmer, brickmason, bus driver, college professor or high school teacher. *Do not* ask for type of industry or the name of the place at which he is employed, such as: University, construction company or Athens High School.

8. *How many years of school did (he, she) finish?* Record the answer given. Some folks may refuse to answer this question. If this happens enter "refused" in the space provided.

9. *Are any persons under 21 years of age from this family now living in an institution? Check the appropriate box and if answer is yes ask, "What type of institution?"* Record the answer given and determine the relationship of the person or persons to the head of the household.

10. *Now for the purpose of our study, I would like to ask you some questions about those persons in your family under 21.* This sentence is just to introduce the section on symptoms.

    Symptoms of Handicapping Conditions: There are eleven types of defects in which we are interested and under each of these eleven a number of symptoms are listed. *Words which are capitalized are for the use of the interviewer only and are not to be read to the respondent. Do not read the Roman Numerals and the heading which follow them.*

    The symptoms should be read exactly as written *except that you must substitute either "she" or "anyone of them" for "he"* depending on the sex or the number of persons under 21 in the family.

    Record the answer to the question and if the respondent has not already given the name of the person or persons having a particular symptom, ask for the name(s) and enter it after the symptom reported in the space provided.

    Space is provided on the last page of the form for entering information about residences between the address you visited and the check-point you were given for that address. Be sure to check this for all households visited in the city of Athens.

    In the space provided for remarks at the end of the form enter any information which you feel is pertinent which is not shown elsewhere on the form.

General Schedule for Interviewer During Sampling Home Interview Period, Clarke-Oconee County Handicapped Children Study

1. Briefing Session—Either 7:15 PM, Jan. 11, or 9:15 AM, Jan. 12.
2. Practice in Using Interview Questionnaires—Remainder of Week.
3. Pick Up of Materials for Conducting Interviews—To be done either morning of or afternoon before conducting first interview, but not before 8:00 AM, Jan. 18. To be picked up at Survey Office.
4. Clarification and Question Session—Either 4:45 PM, Jan. 18 (for those who begin on first day) or 4:45 PM, Jan. 19 (for those who begin on second day).
5. Daily Turn-in of Completed Interview Forms—Completed interview sheets for a particular day should be turned in to Survey headquarters by 10:00 AM of the following day.
6. Final Checkout—At end of all interviewing, each interviewer will contact control clerk (Mrs. Pfeutze) to indicate that all interviews have been completed.

Instructions to Athens Interviewers on Visitation Procedure

Each of you will be furnished a list of approximately 30 pairs of street addresses. The first address in each pair is the address to be visited by you for interview purposes. The second address (referred to as a checkpoint address) is given in order to make sure that we can get a sampling of any new houses that might have been built recently or any that might have been left out of the last city directory in error. You will visit the first address, interviewing the occupant. You will then proceed to the second address given. In the event that addresses is located between the house you visited and the second address, you will interview someone at each of these addresses—if the address serves as a residence. In most cases there will be no additional houses, but in a few cases new structures will have been put up between the two addresses.

This method of sampling is called the half-interval method and is designed so that we can include in our sample approximately 10 per cent of the homes in Athens which are not listed in the last city directory (left out in error or built recently) as well as approximately 10 per cent of the homes listed in the last city directory, which was prepared November, 1951.

Here are specific instructions:

(1) Interview a responsible person (parent, guardian, or responsible person who looks after children—not a maid) at the first address in each pair.

(2) At close of interview, as you leave address Number 1 of each pair, locate the second address of that pair. It should be on the same side of the street, and, in most cases, right next door to the first address. If there are no additional addresses between the home you visited and the second address, then proceed to the next pair. If there are additional homes—one or more—visit those homes as you did the first one in the pair of addresses.

(3) If no one is at home when you call, make a record of it and make a follow-up visit later at a time when you think that you are most likely to find someone at home. If children are at home but not the parents, you may get the telephone number and parent's name so that you can make an appointment by telephone for a revisit. However, interviews must *not* be conducted by telephone.

(4) Proceed to first address in next pair.

Addresses included in the sample (the addresses you will visit) are the first address in each pair on your list and any houses located between the first address and check point address. Do *not* visit check point address.

In case address to be visited is found to be a business address, hotel, hospital, dormitory, or some similar structure, make a note of that on the interview sheet, but do not attempt to interview anyone there. You will, however, go through the procedure of using the check point. Any houses between the business address and your check point will be included in the sample, thus necessitating visits and interviews. Business addresses doubling as residences (as a grocery store with family living in the back) will be visited if they are listed as the first address of a pair or are located between the first address and the check point address.

Examples of House Locations In Athens Interviews

EXAMPLE A	EXAMPLE B	EXAMPLE C	EXAMPLE D
#204	#101	#802	#1602
#206	#103	#804	#1608
#210	#105	#806	#1612
	#107		
#212	#109	#818	#1702
		#820	#1704

EXAMPLE A: Address to be visited: 206 St. Charles St.
Check point: 210 St. Charles St.

Visit 206 St. Charles and obtain interview. As you leave the 206 address, find your check point address—210 St. Charles. Do *not* visit and interview occupants of 210—use it only as a checkpoint for additional houses. Since there are no houses located between 206 and 210, you have completed your work with this pair and may proceed to the next pair of addresses.

EXAMPLE B: Address to be visited: 101 Hampson
Check point: 107 Hampson

Visit 101 Hampson and obtain interview. As you leave the 101 address, find your check point address—107 Hampson. Do *not* visit and interview occupant of 107—use it only as a checkpoint for additional houses. In this case, there are two addresses—103 and 105—between the address to be visited and the check point. Both of these will be included in the sample. You will visit and interview someone in each of these houses just as you did in 101 Hampson—if the two houses are residences.

EXAMPLE C: Address to be visited: 818 Billings St.
Check point: End of street

Visit 818 Billings and obtain interview. As you leave the 818 address, find your check point—in this case the end of the street. One house (820 Billings) is located between 818 and the end of the street. It will be visited.

EXAMPLE D: Address to be visited: 1608 Lund St.
Check point: 1702 Lund St.

Visit 1608 Lund. In this case 1608 is a grocery store. Therefore, you do *not* conduct an interview unless it also serves as a residence. (In most cases when you locate your address, if it is a business you can determine it without having to go inside.) You look next for the check point address and, in this case, you find it (1702 Lund) in the next block. One address (1612 Lund) is located between the two. It will be included in the sample. If it also is a business address without people living in it, it will be omitted. However, if it is a residence, it will be visited.

EXAMPLE E: Address to be visited: 1919 Pierpont—804
Check point: 1919 Pierpont—805

Visit 1919 Pierpont. In this case, it is an apartment building, similar to the Lyons or Mathis Apartments. Interview occupants of Apartment 804 if they constitute a household (to be explained later). Your checkpoint is Apartment 805 in the same structure, and no new addresses could likely be located between them. You do *not* visit Apartment 805.

Dwelling Units To Be Visited In Small Towns

In the seven town areas (Winterville, Whitehall, Watkinsville, Bogart, Bishop, North High Shoals, and Farmington), houses to be visited will be encircled in red pencils on the maps of those areas. Each interviewer for such an area will find a copy of the map in her folder (to be picked up on Monday, January 18, or Tuesday, January 19, at the Survey Office). Houses to be visited will be plainly marked. Enough landmarks are provided on maps so that interviewers probably find it easy to locate selected houses. Only those houses marked on maps will be visited within these towns; no substitutes may be made. See the instructions.

Houses To Visit In Open Country

In all areas in Clark and Oconee Counties with exception of that in Athens and the seven small towns mentioned in paragraph above, area visitation will be made. Twenty-six areas have been selected. Each interviewer will be given a specific area on the Clarke-Oconee County map to cover. She will visit all houses located within that area—regardless of where within that area they are located with the exceptions noted below. Areas for such visitation will be clearly marked on map which interviewer will find in her folder (to be picked up on Monday, January 18, or Tuesday, January 19, at Survey Office). Boundary lines for area assignments are in most cases clearly indicated (roads, rivers, streams, railroads, etc.) so that interviewer will have little trouble in locating the area. In some instances it was necessary to extend imaginary lines to delineate the sample segment. Use the utmost care in determining as nearly as possible where this imaginary line runs and use it in determining the boundaries just as the roads and streams are used. Mileage around all sample segments should be checked on your speedometer and noted on the map in red.

In two of the twenty-six areas, every other house will be visited. The details of this will be covered in detail with the interviewer assignd to these areas.

APPENDIX J

Questionnaire Form for Household Canvass

Sample Survey of Handicapped Children in Clarke and Oconee Counties

(ALL INFORMATION WILL BE REGARDED AS STRICTLY CONFIDENTIAL AND USED ONLY FOR THE PURPOSES OF THIS STUDY)

1. a. ADDRESS TO BE VISITED____________________

____

b. CHECKPOINT ATHENS ONLY)____________________

2. INTERVIEWER____________________

No. Call	Date	Hour	Result
1st			
2nd			
3rd			

3. Are there any other households at this address? YES ☐ NO ☐ If answer is Yes, how many? __________

RACE: INTERVIEWER OBSERVE:
WHITE ☐ NON-WHITE ☐

4. How many rooms are occupied by this household (excluding bathroom?__________

5. Do you own or rent this house? OWN ☐ RENT ☐

6. How many persons are in this household (Include those under 21 living elsewhere) ?__________

What are their names	Relation to Head	Age	Sex	Remarks
	Head			

7. What is (Mr., Mrs.) (HEAD OF FAMILY) occupation?__________

8. How many years of school did (he, she) finish?__________

9. Now, for the purpose of our study, I would like to ask you some questions about members of your family under 21 years of age.

APPENDIX J

Symptoms of Handicapping Conditions

I. HARELIP AND CLEFT PALATE

1. Does (he) have harelip (cleft lip) or cleft palate (regardless of amount of correction or care)? YES ☐ NO ☐ ____

II. CEREBRAL PALSY OR ORTHOPEDIC DEFECT

2. Does (he) have poor use of legs (difficulty in walking, cannot walk, or disturbed gait)? YES ☐ NO ☐ ____
3. Does (he) have poor balance or coordination? YES ☐ NO ☐ ____
4. Does (he) have poor use of arms? YES ☐ NO ☐ ____
5. Does (he) have unusual jerking of arms, legs, face or body? YES ☐ NO ☐ ____
6. Does (he) have deformed arms, legs, or trunk of body? YES ☐ NO ☐ ____

III. POOR HEARING AND DEAFNESS

7. Does (he) have known or suspected poor hearing (possibly by audiometric or other tests)? YES ☐ NO ☐ ____
8. Does (he) have frequent ear infections? YES ☐ NO ☐

IV. SPEECH DEFECTS

Ask Only for Children Between 2½ and 4 Years of Age:

9. Was (he) unusually late in learning to talk (2½ to 3 years of age)? YES ☐ NO ☐ ____
10. Did (his) speech fail to develop like that of other children you know (unusually different and disturbing)? YES ☐ NO ☐ ____

Ask Only for Persons Over 4 Years of Age:

11. Are strangers unable to understand the child? YES ☐ NO ☐ ____
12. Does (he) leave out or substitute sounds (unusually different speech)? YES ☐ NO ☐ ____
13. Does (he) stutter a great deal? YES ☐ NO ☐ ____
14. Does (he) have an unusually husky or unusually unpleasant voice? YES ☐ NO ☐ ____

V. EYE DEFECTS

15. Does (he) have a defect of the eyeball or the eyelid? YES ☐ NO ☐
16. Does (he) have crossing, rolling, or twitching of the eyeball (not the eyelids)? YES ☐ NO ☐ ____
17. Does (he) have a visual handicap of 20/70 or worse in either eye without glasses (if you know the result of an eye test)? YES ☐ NO ☐
18. Does (he) have a visual handicap of 20/50 or worse in both eyes with eye glasses (if you know the result of an eye test)? YES ☐ NO ☐

Ask Only for Children Now Under 4 Years of Age:

19. Did (he) weigh not more than three pounds at birth or was premature as much as eight weeks? YES ☐ NO ☐ ____

APPENDIX J

VI. MENTAL RETARDATION

20. Has (he) been diagnosed or is (he) known to be mentally handicapped (feeble-minded)? YES ☐ NO ☐ ____________

21. Did (he) fail to sit up by one year of age? *(Note: If answer is Yes, ask "Why did he fail to sit up?" There may be an adequate explanation, as crippled.)* YES ☐ NO ☐ ____________

22. Did (he) fail to walk by two years of age? *(Note: If answer is Yes, ask "Why did he fail to walk by two years of age?" There may be adequate explanation, as crippled.)* YES ☐ NO ☐ ____________

23. Did (he) fail to talk by three years of age? *(Note: If answer is Yes, ask "Why did he fail to talk by three years of age?" There may be adequate explanation, as totally deaf.)* YES ☐ NO ☐ ____________

VII. COSMETIC DEFECT

24. Does (he) have any type of birthmark or disfiguring nature, such as a blotch on the face? YES ☐ NO ☐ ____________

25. Does (he) have any type of facial deformity not mentioned elsewhere? YES ☐ NO ☐ ____________

26. Does (he) have any unusual parts, such as extra fingers? YES ☐ NO ☐ ____________

VIII. ORTHODONTIC DEFECT

27. Does (he) have an obvious jaw deformity? YES ☐ NO ☐ ______.
Ask Only for Persons Over 6 Years of Age:

____

28. Do (his) teeth fail to come together for proper chewing or are they very crooked? YES ☐ NO ☐ ____________

IX. EPILEPSY

29. Has (he) had more than one convulsion, fit, or spell? YES ☐ NO ☐
____

30. Has (he) had any convulsions after three years of age? YES ☐ NO ☐ ____________

31. Has (he) had spells of short duration in which (he) stares straight ahead or drops things or falls down frequently without reason? YES ☐ NO ☐ ____________

32. Does (he) often have violent temper outbursts which (he) does not seem able to control? YES ☐ NO ☐ ____________

X. HEART CONDITION

33. Does (he) have or is (he) thought to have had rheumatic fever? YES ☐ NO ☐ ____________

34. Does (he) have abnormal heart sounds? *(Should be based on medical diagnosis)* YES ☐ NO ☐ ____________

35. Does (he) have known or suspected heart condition that is now handicapping or might later handicap (him)? *(Should be based on medical diagnosis)* YES ☐ NO ☐ ____________

APPENDIX J

XI. PERSONALITY DEFECTS

Ask Only for Persons Over 7 Years of Age:

36. **Does (he) show very peculiar behavior, such as:**
twitching or other strange mannerisms which (he) does not seem able to control;
often hurting other children without reason;
destroying things so much that (he) has been put out of play school group;
extreme fear of anything new and always staying close to parents;
complete lack of interest in anything, either people or surroundings?
YES ☐ NO ☐ ________________

37. **Does (he) for long periods of time go back to a more childish manner of acting or speaking? YES ☐ NO ☐ ________________**

38. **Does (he) repeatedly run away from home, repeatedly play hooky from school, or repeatedly have trouble with courts, school or other authorities? YES ☐ NO ☐ ________________**
Who is your family physician?________________
Were there any other dwelling units between the address of this interview and your check points as shown in items 1a and 1b? (Note: This applies to Athens interviewers only.) **YES ☐ NO ☐**

REMARKS:

APPENDIX K

GEOGRAPHIC AND RACIAL DISTRIBUTION OF SAMPLE POPULATION COMPARED WITH 1950 CENSUS DATA

			Per Cent of Population			
	Per Cent of Households		All Ages		Under 21 Years of Age	
Area and Race	Census	Sample	Census*	Sample	Census*	Sample
Total All Classes, Both Counties	100.0	100.0	100.0	100.0	100.0	100.0
Clarke — Total	84.5	88.4	82.1	86.4	79.9	85.0
Urban (Athens)	65.5	65.5	60.8	61.9	56.4	59.2
White	46.6	44.8	41.1	40.5	36.1	35.6
Non-white	18.9	20.8	19.6	19.6	20.2	22.1
Unknown Race	0	0	0	1.8	0	1.5
Rural	19.0	22.9	21.4	24.5	23.5	25.8
White	15.0	18.6	15.7	18.7	15.7	18.1
Non-white	4.0	4.2	5.7	5.4	7.8	7.5
Unknown Race	0	0	0	0.4	0	0.1
Oconee — Total	15.5	11.6	17.9	13.6	20.1	15.0
White	12.4	8.5	13.2	9.6	13.7	9.8
Non-white	3.2	3.1	4.7	3.7	6.5	5.0
Unknown Race	0	0	0	0.3	0	0.1

*Adjusted estimates excluding college students

Appendix K Age Distribution of Canvass Population and Canvass Clinic Patients

Age Group	Number In Total Canvass Population	Number Reported	Number Seen At Clinic	Attendance Correction Factor	Number of Handicapped Children Found
0 - 4	374	26	24	1.083	15
5 - 9	359	71	45	1.578	32
10 - 14	327	68	41	1.659	24
15 - 20	308	36	18	2.0	12
Total	1368*	201	128	-	83

*Age unknown in five additional cases.

Appendix L --

Usefulness of Interview Questions in Formulative Presumptive Diagnoses

Canvass Cases

See Questionnaire Appendix J		Number of Affirmative Responses	Consistency -- Same Presumptive Diagnosis	
Diagnostic Objective	Question Group and Number		Number	Per cent
Orthodontic	VIII	21	18	85.7
	27	4	2	50.0
	28	19	17	89.4
Epilepsy	IX	23	12	52.1
	29	10	9	90.0
	30	2	2	100.0
	31	7	3	42.8
	32	8	1	12.5
Heart	X	28	23	82.1
	33	19	17	89.4
	34	14	12	85.7
	35	12	10	83.3
Personality	XI	19	11	57.8
	36	15	10	66.6
	37	5	3	60.0
	38	3	1	33.3

Appendix L --

Presumptive Diagnoses

Usefulness of Interview Questions in Formulative Presumptive Diagnoses

Canvass Cases

See Questionnaire Appendix J		Number of Affirmative Responses	Consistency -- Same Presumptive Diagnosis	
Diagnostic Objective	Question Group and Number		Number	Per cent
Cleft Palate and Harelip	I	3	1	33.3
	1	3	1	33.3
Cerebral Palsy and Orthopedic	II	21	19	90.4
	2	16	15	93.7
	3	9	8	88.8
	4	7	5	71.4
	5	4	2	50.0
	6	6	5	83.3
Hearing	III	64	58	90.6
	7	40	35	87.5
	8	36	33	91.6
Speech	IV	49	41	83.6
	9	5	3	60.0
	10	6	4	66.6
	11	27	22	81.4
	12	21	17	80.9
	13	17	15	88.2
	14	4	2	50.0
Eye	V	76	60	78.9
	15	29	23	79.3
	16	25	23	92.0
	17	38	27	71.0
	18	18	13	72.2
	19	4	3	75.0
Mental Retardation	VI	20	11	55.0
	20	12	10	83.3
	21	6	4	66.6
	22	8	3	37.5
	23	9	6	66.6
Cosmetic	VII	10	8	80.0
	24	7	6	85.7
	25	3	2	66.6
	26	-	-	-

APPENDIX M

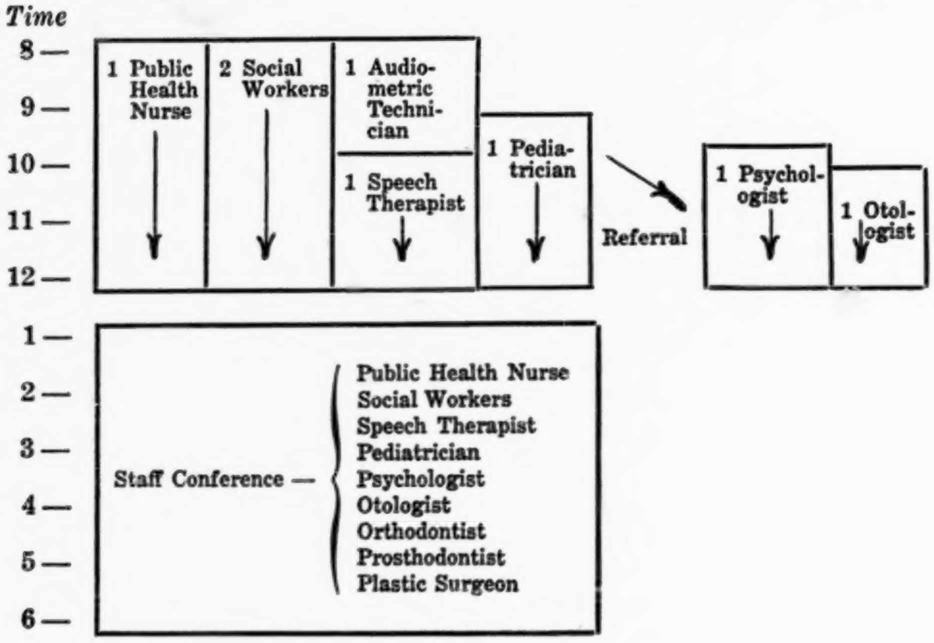
Organization of Diagnostic Clinics

Cleft Lip or Palate

Estimated number of children to be reported—15 cases—all to be seen at diagnostic clinic.
1 Session required

Each Day

Morning—Individual Interviews		Total Personnel Time
1 Public Health Nurse sees all cases routinely	— 15 cases	4 Hours
2 Social Workers see all cases routinely	— 15 cases	8 Hours
1 Audiometric Technician does hearing test on all cases of age	— 10 cases	2 Hours
1 Speech Therapist does speech appraisal on all cases of age	— 10 cases	2 Hours
1 Pediatrician sees all cases routinely	— 15 cases	3 Hours
1 Psychologist sees referral cases only	— 5 cases	2½ Hours
1 Otologist sees referral cases only	— 5 cases	1½ Hours



Actual Clinic Experience (3/9/54)

15 Patients Seen		Total Personnel Time
2 Public Health Nurses saw	12 cases	2 Hours 30 Minutes
2 Social Workers saw	15 cases	6 " 20 "
1 Audiometric Technician saw	10 cases	3 " 0 "
1 Speech Therapist saw	12 cases	3 " 20 "
1 Pediatrician saw	15 cases	3 " 25 "
1 Psychologist saw	4 cases	3 " 45 "
1 Otologist saw	2 cases	0 " 30 "

Staff Conference — 15 patients in 3 hours elapsed time.

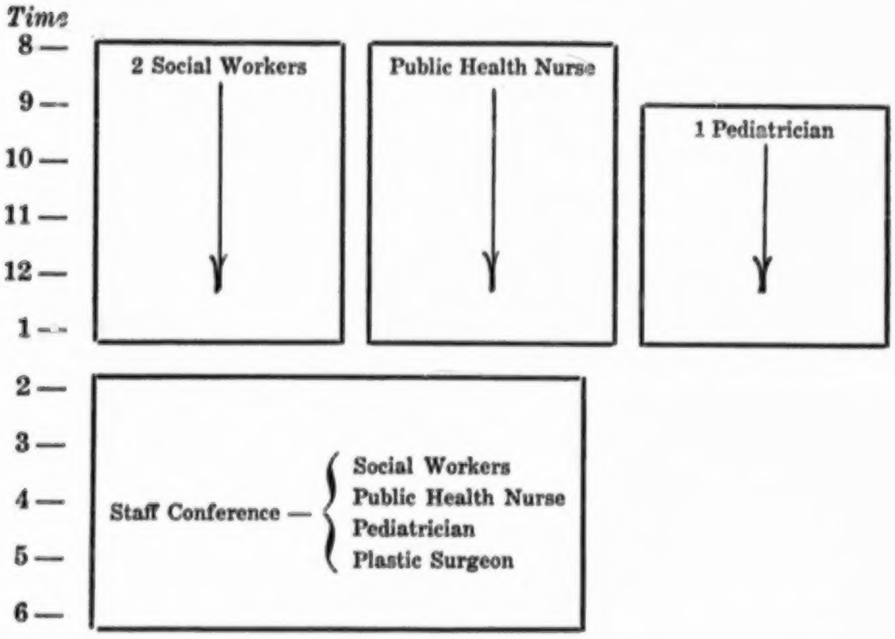
APPENDIX M

Cosmetic Handicaps

Estimated number of children to be reported — 20
All 20 to be processed through diagnostic clinic
1 session required

Each Day

Morning—Individual Interviews		Total Personnel Time
2 Social Workers see all cases routinely	— 20 cases	10 Hours
1 Public Health Nurse sees all cases routinely	— 20 cases	5 Hours
1 Pediatrician sees all cases routinely	— 20 cases	4 Hours



Actual Clinic Experience (3/8/54)

23 Patients Seen By All Personnel	Total Personnel Time
2 Social Workers	7 Hours 45 Minutes
2 Public Health Nurses	4 Hours 5 Minutes
1 Pediatrician	3 Hours 30 Minutes
1 Plastic Surgeon (Surgeon preferred to see all cases before conference.)	1 Hour 55 Minutes

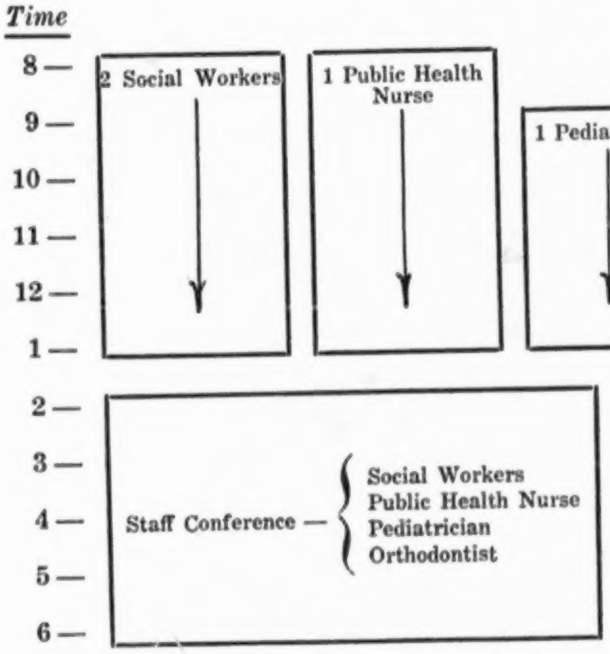
Staff Conference — 16 patients in 2 hours elapsed time.

APPENDIX M

Dento-Facial (orthodontic) Defects

Estimated number of children to be reported — 100 cases
40% sample to be processed through diagnostic clinic — 40 cases
2 sessions required (20 cases each)

Morning—Individual Interviews		**Total Personnel Time**
2 Social Workers see all cases routinely	— 20 cases	10 Hours
1 Public Health Nurse sees all cases routinely	— 20 cases	5 Hours
1 Pediatrician sees all cases routinely	— 20 cases	4 Hours
1 Orthodontist sees all cases routinely	— 20 cases	4 Hours



Actual Clinic Experience (3/10/54)

26 Patients Seen		**Total Personnel Time**
2 Social Workers saw	— 21 cases	9 Hours 0 Minutes
2 Public Health Nurses saw	— 21 cases	6 Hours 15 Minutes
1 Pediatrician saw	— 19 cases	5 Hours 10 Minutes
1 Orthodontist saw	— 23 cases	4 Hours 30 Minutes

Staff Conference — 26 patients in 4 hours 15 minutes elapsed time.

APPENDIX M

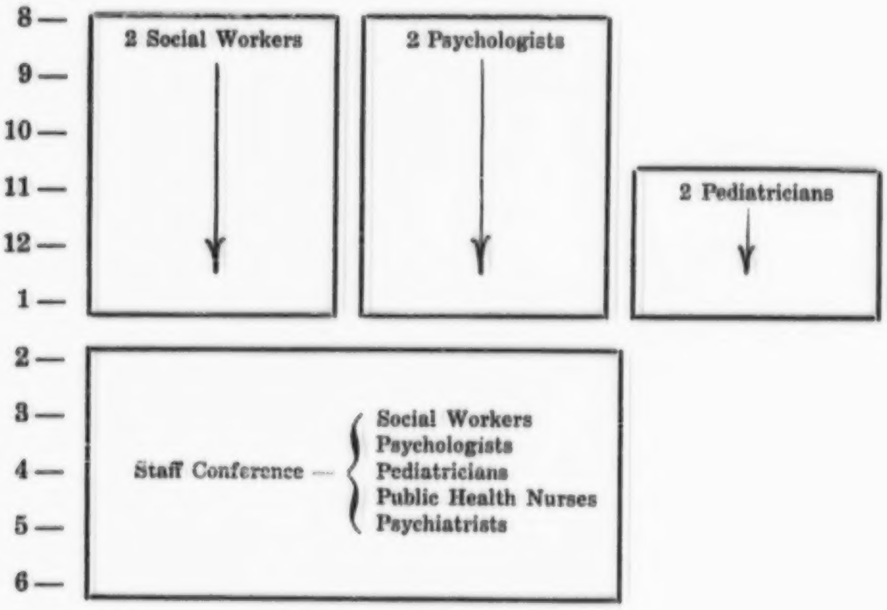
Emotional Disturbance

Estimated number of children to be reported — 50
60% sample to be processed through diagnostic clinic — 30 cases
(Jointly also for 10 mental retardation cases — total 40 cases)
2 sessions required (20 cases each)

Each Day

Morning and early afternoon—individual interviews		Total Personnel Time
2 Social Workers see all cases routinely	— 20 cases	10 Hours
2 Psychologists see all cases routinely	— 20 cases	10 Hours
2 Pediatricians see all cases routinely	— 20 cases	5 Hours

Time



Actual Clinic Experience (4/2/54)

19 Patients Seen		Total Personnel Time
3 Social Workers saw	— 18 cases	11 Hours 20 Minutes
2 Psychologists saw	— 15 cases	12 Hours 0 Minutes
2 Pediatricians saw	— 18 cases	4 Hours 5 Minutes

Staff Conference — 19 patients in 2 Hours 50 Minutes elapsed time.

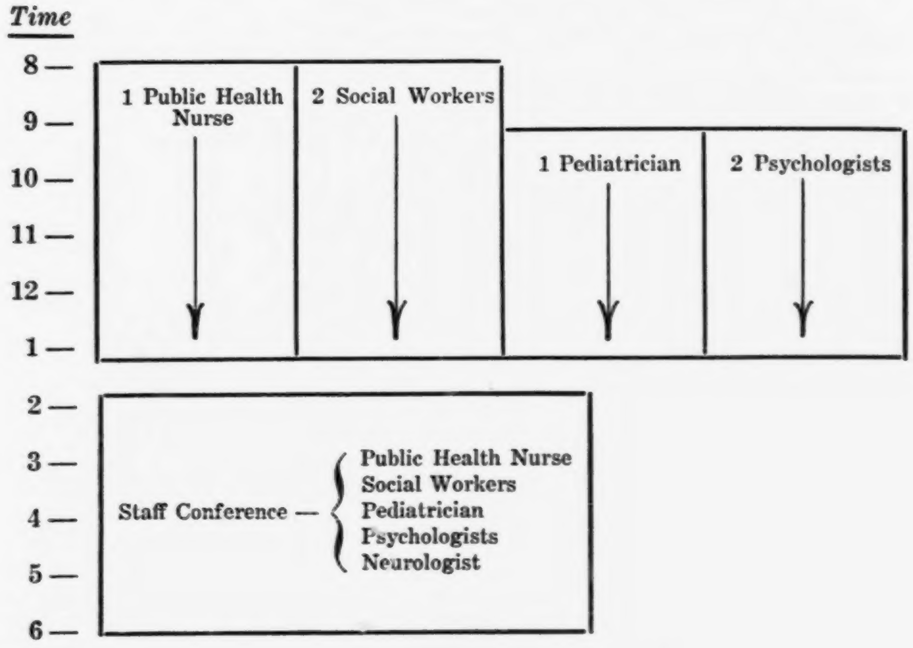
APPENDIX M

Epilepsy

Estimated number of children to be reported — 50 cases
66% sample to be processed through diagnostic clinic — 32 cases
2 sessions required (16 cases each)

Each Day

Morning—Individual Interviews		Total Personnel Time
1 Public Health Nurse sees all cases routinely	— 16 cases	4 Hours
2 Social Workers see all cases routinely	— 16 cases	8 Hours
1 Pediatrician sees all cases routinely	— 16 cases	3 Hours
2 Psychologists see all cases of suitable age	— 12 cases	6 Hours



Actual Clinic Experience (3/4/54)

23 Patients Seen		Total Personnel Time
2 Public Health Nurses saw	— 13 cases	4 Hours 0 Minutes
2 Social Workers saw	— 23 cases	10 Hours 0 Minutes
1 Pediatrician saw	— 20 cases	3 Hours 0 Minutes
2 Psychologists saw	— 18 cases	5 Hours 45 Minutes
2 Neurologists saw (Preferred to see all cases before conference.)	— 20 cases	6 Hours 10 Minutes

Staff Conference — 20 patients in 2 Hours 15 Minutes elapsed time.

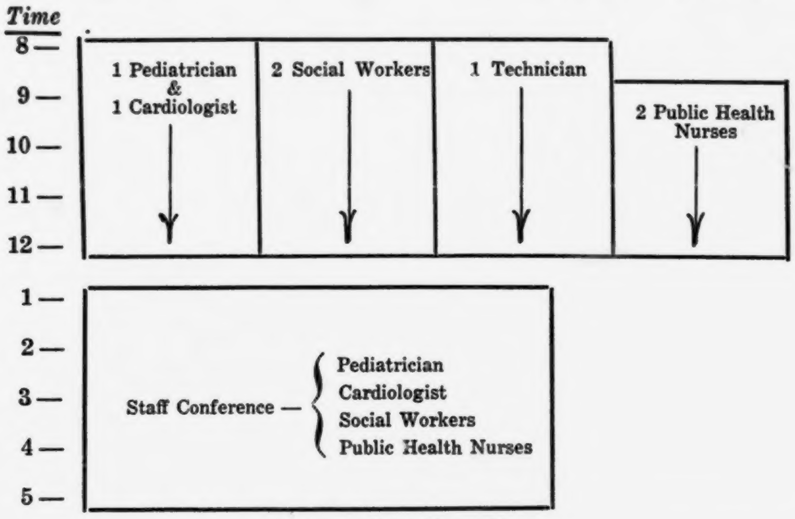
APPENDIX M

Heart Disease and Rheumatic Fever

Estimated number of children to be reported — 500 cases
20% sample to be processed through diagnostic clinic — 100 cases
4 sessions required (25 cases each)

Each Day

Morning—Individual Interviews		**Total Personnel Time**
1 Pediatrician and 1 Cardiologist see all patients routinely and together	— 25 cases	4 Hours
2 Social Workers see all patients unless normal findings and referral not asked	— 20 cases	8 Hours
1 Technician for X-ray and laboratory work as needed		4 Hours
2 Public Health Nurses see all patients routinely	— 25 cases	6 Hours



Actual Clinic Experience

(Pediatrician and Cardiologist worked separately;
Social Workers saw all patients routirely.)

3/5/54 — 17 Patients Seen

	Cases Seen	Total Personnel Time
1 Pediatrician saw	— 17 cases	3 Hours 25 Minutes
1 Cardiologist saw	— 11 cases	3 Hours 10 Minutes
2 Social Workers saw	— 17 cases	5 Hours 25 Minutes
2 Public Health Nurses saw	— 17 cases	4 Hours 20 Minutes
1 Technician		All Day
Fluoroscopes Done	— 4 cases	
X-rays Taken (35 mm)	— 17 cases	
X-rays Taken (14x17)	— 3 cases	
ECG's Done	— 0 cases	

3/12/54 — 26 Patients Seen

	Cases Seen	Total Personnel Time
1 Pediatrician saw	— 23 cases	5 Hours 0 Minutes
1 Cardiologist saw	— 25 cases	6 Hours 0 Minutes
2 Social Workers saw	— 23 cases	8 Hours 30 Minutes
2 Public Health Nurses saw	— 23 cases	7 Hours 5 Minutes
1 Technician		All Day
Fluoroscopes Done	— 3 cases	
X-rays Taken (35 mm)	— 23 cases	
X-rays Taken (14x17)	— 3 cases	
ECG's Done	— 9 cases	

Staff Conference — Time record was not kept.

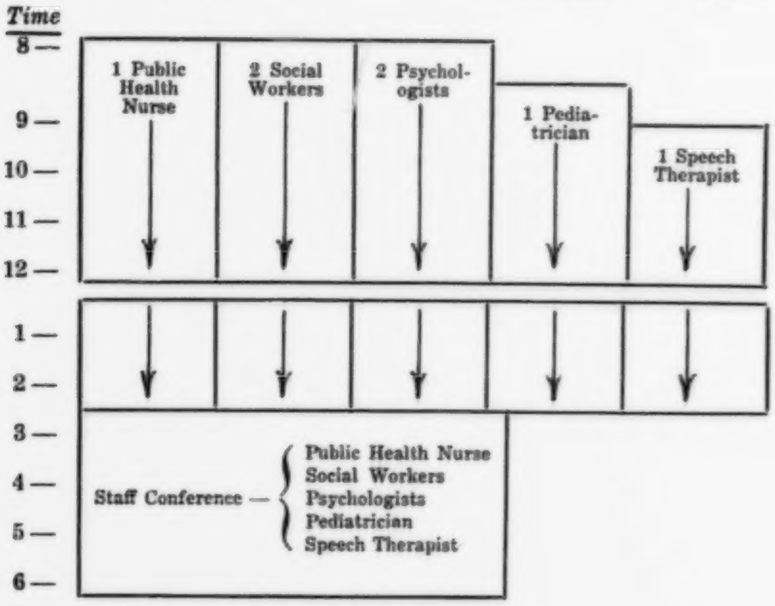
APPENDIX M

Mental Retardation

Estimated number of children to be reported — 300
16% sample to be processed through diagnostic clinic — 50 cases
2 sessions required (25 cases each)

Each Day

Morning and Early Afternoon—Individual Interviews		Total Personnel Time
1 Public Health Nurse sees all cases routinely	— 25 cases	6 Hours
2 Social Workers see all cases routinely	— 25 cases	12 Hours
2 Psychologists see all cases routinely	— 25 cases	12 Hours
1 Pediatrician sees all cases routinely	— 25 cases	4½ Hours
1 Speech Therapist does speech appraisal on all cases	— 15 cases	3 Hours



Actual Clinical Experience

3/1/54 — 31 Patients Seen

	Cases Seen	Total Personnel Time
2 Public Health Nurses saw	— 26 cases	8 Hours 55 Minutes
2 Social Workers saw	— 20 cases	13 Hours 10 Minutes
2 Psychologists saw	— 31 cases	12 Hours 15 Minutes
2 Pediatricians saw	— 30 cases	7 Hours 0 Minutes
1 Speech Therapist saw	— 26 cases	4 Hours 5 Minutes

Staff Conference — 20 patients in 3 hours 15 minutes elapsed time.

3/2/54 — 22 Patients Seen

	Cases Seen	Total Personnel Time
2 Public Health Nurses saw	— 20 cases	6 Hours 30 Minutes
2 Social Workers saw	— 21 cases	10 Hours 25 Minutes
2 Psychologists saw	— 21 cases	8 Hours 10 Minutes
2 Pediatricians saw	— 21 cases	6 Hours 0 Minutes
1 Speech Therapist	— 21 cases	3 Hours 0 Minutes

Staff Conference — 21 patients in 3 hours elapsed time.

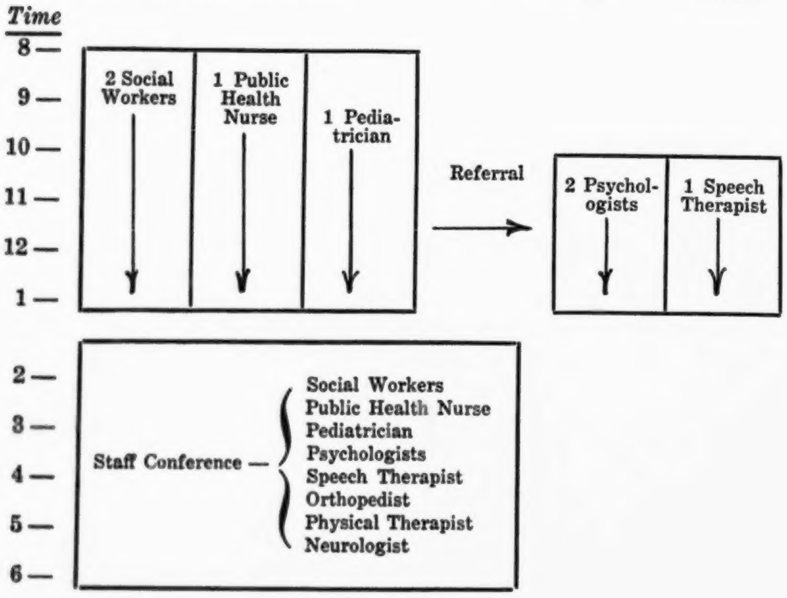
APPENDIX M

Orthopedic and Cerebral Palsy

Estimated number of children to be reported — 130
50% sample to be processed through diagnostic clinic — 60 cases
3 sessions required (20 cases each)

Each Day

Morning — Individual Interviews		**Total Personnel Time**
2 Social Workers see all cases routinely	— 20 cases	10 Hours
1 Public Health Nurse sees all cases routinely	— 20 cases	5 Hours
1 Pediatrician sees all cases routinely	— 20 cases	4 Hours
2 Psychologists see referrals and Cerebral Palsy cases only	— 12 cases	6 Hours
1 Speech Therapist sees referrals and Cerebral Palsy cases only	— 10 cases	3 Hours



Actual Clinic Experience

3/11/54 — 21 Patients Seen

	Cases Seen	Total Personnel Time
2 Social Workers saw	— 15 cases	7 Hours 15 Minutes
2 Public Health Nurses saw	— 15 cases	4 Hours 50 Minutes
1 Pediatrician saw	— 14 cases	4 Hours 20 Minutes
2 Psychologists saw	— 13 cases	7 Hours 20 Minutes
1 Speech Therapist saw	— 7 cases	2 Hours 15 Minutes

Orthopedist, Neurologist and Physical Therapist working together saw 17 patients in 6 Hours.

Staff Conference — 20 patients in 4 Hours elapsed time.

3/16/54 — 20 Patients Seen

	Cases Seen	Total Personnel Time
2 Social Workers saw	— 19 cases	8 Hours 0 Minutes
2 Public Health Nurses saw	— 19 cases	4 Hours 0 Minutes
1 Pediatrician saw	— 19 cases	4 Hours 0 Minutes
2 Psychologists saw	— 8 cases	7 Hours 0 Minutes
1 Speech Therapist saw	— 10 cases	4 Hours 15 Minutes

Orthopedist, Neurologist and Physical Therapist working together saw 18 patients in 4 Hours.

Staff Conference — 20 patients in 3 Hours 25 Minutes elapsed time.

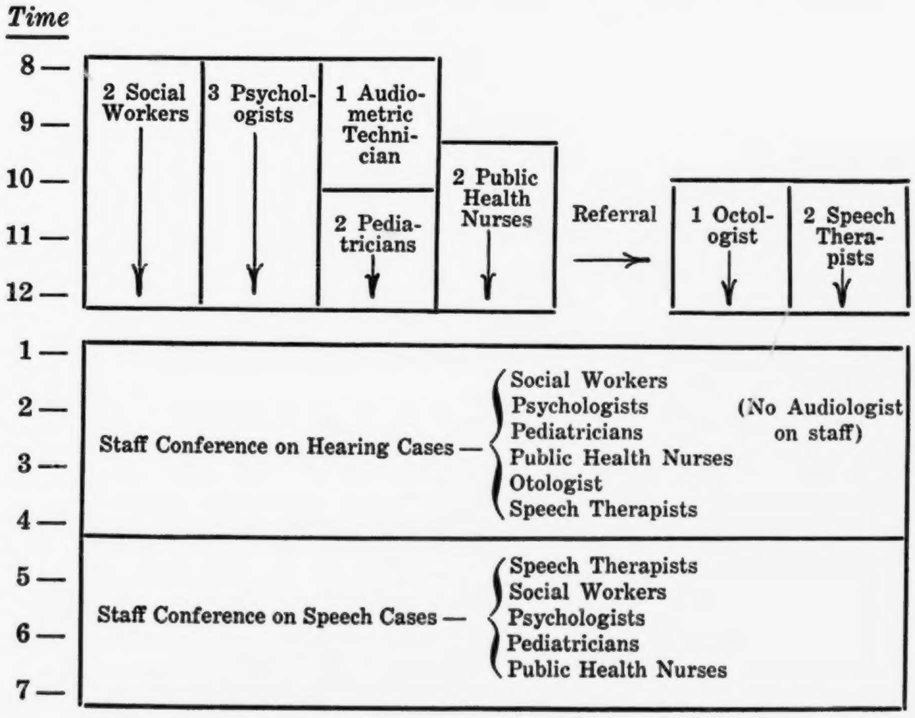
APPENDIX M

Speech and Hearing

Estimated number of children to be reported — 500 cases
20% Sample to be processed through diagnostic clinic — 100 cases
4 sessions required (25 cases each)

Each Day

Morning — Individual Interviews		Total Personnel Time
2 Social Workers see all cases routinely	— 25 cases	8 Hours
3 Psychologists see all cases routinely	— 25 cases	12 Hours
1 Audiometric Technician tests all cases of age	— 20 cases	2 Hours
2 Pediatricians see all cases routinely	— 25 cases	4 Hours
2 Public Health Nurses see all cases routinely	— 25 cases	6 Hours
1 Otologist sees referrals only	— 12 cases	2 Hours
2 Speech Therapists see referrals only	— 12 cases	4 Hours


Time
8 —
9 —
10 —
11 —
12 —
1 —
2 —
3 —
4 —
5 —
6 —
7 —
2 Social Workers
3 Psychologists
1 Audiometric Technician
2 Pediatricians
2 Public Health Nurses
Referral
1 Octologist
2 Speech Therapists
Staff Conference on Hearing Cases — Social Workers, Psychologists, Pediatricians, Public Health Nurses, Otologist, Speech Therapists
(No Audiologist on staff)
Staff Conference on Speech Cases — Speech Therapists, Social Workers, Psychologists, Pediatricians, Public Health Nurses

(Two Staff Conferences held concurrently or in sequence.)

Time Sheets not kept for Actual Clinic Experience.

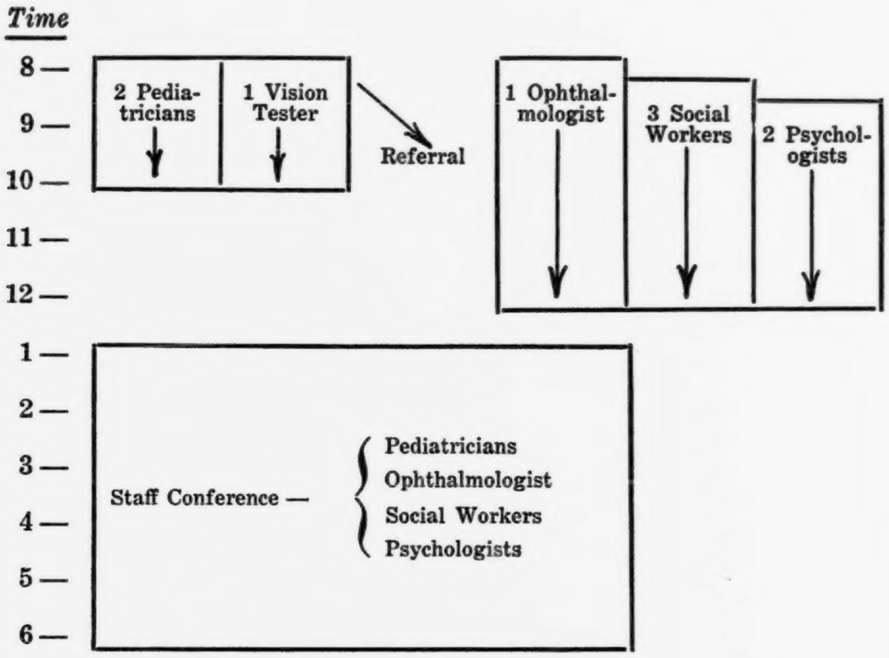
APPENDIX M

Vision and Other Eye Defects

Estimated number of children to be reported — 300 cases
40% sample to be processed through diagnostic clinic — 120 cases
4 sessions required (30 cases each)

Each Day

Morning — Individual Interviews		**Total Personnel Time**
2 Pediatricians see all cases routinely	— 30 cases	6 Hours
1 Vision Tester tests all cases of age	— 25 cases	3 Hours
1 Ophthalmologist sees referral cases	— 20 cases	4 Hours
3 Social Workers see all cases referred to ophthalmologist	— 20 cases	10 Hours
2 Psychologists see cases on special referral	— 12 cases	6 Hours



Actual Clinic Experience (3/15/54)

36 Patients Seen		**Total Personnel Time**
2 Pediatricians saw	— 36 cases	6 Hours 0 Minutes
1 Vision Tester saw	— 20 cases	3 Hours 0 Minutes
1 Ophthalmologist saw	— 20 cases	3 Hours 30 Minutes
3 Social Workers saw	— 16 cases	7 Hours 10 Minutes
2 Psychologists saw	— 10 cases	6 Hours 20 Minutes
1 Public Health Nurse saw	— 14 cases	4 Hours 0 Minutes

(Staff Conference — time record not kept)

Appendix N

Combinations of Diagnoses
Paired Co-existence of Final Diagnoses

Canvass cases seen in Clinics

Diagnosis	Total Cases	Diagnosis											
		Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturb-ance	Epilepsy	Eye	Hearing	Heart	Mental Retarda-tion	Ortho-dontic	Ortho-pedic	Speech
Cerebral Palsy	5	5	1	3	0	0	2	0	0	5	0	1	5
Cleft Palate	1	1	1	0	1	0	1	1	0	2	0	0	2
Cosmetic	35	3	0	35	6	1	12	1	3	12	10	8	5
Emotional Disturbance	23	0	1	6	23	0	4	5	0	11	2	2	10
Epilepsy	3	0	0	1	0	3	0	0	0	1	1	1	0
Eye	21	2	1	12	4	0	21	1	0	9	1	1	4
Hearing	15	0	1	1	5	0	1	15	1	6	0	2	5
Heart	8	0	0	3	0	0	0	1	8	1	1	0	0
Mental Retardation	32	5	2	12	11	1	9	6	1	32	2	4	16
Orthodontic	14	0	0	10	2	1	1	0	1	2	14	1	1
Orthopedic	10	1	0	8	2	1	1	2	0	4	1	10	2
Speech	25	5	2	5	10	0	4	5	0	16	1	2	25
No Handicap	27												

APPENDIX N

FREQUENCY OF CO-EXISTENT HANDICAPPING CONDITIONS IN FINAL DIAGNOSES CANVASS CASES ONLY

Number of Conditions Each Child	Number of Different Children	Cerebral Palsy	Cleft Palate	Cosmetic	Personality Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech	Total Number of Conditions
1	2			X										2
	3				X									3
	2					X								2
	4						X							4
	6							X						6
	4								X					4
	2									X				2
	3										X			3
	3												X	3
2	2			X								X		4
	1			X									X	2
	4			X			X							8
	1			X						X				2
	5			X							X			10
	1			X					X					2
	1				X			X						2
	3				X								X	6
	1				X					X				2
	2						X			X				4
	1							X	X					2
	2								X				X	4
	1										X		X	2
3	1			X						X		X		3
	2			X	X							X		6
	1			X			X						X	3
	3			X			X			X				9
	1			X	X		X							3
	1			X						X	X			3
	1			X	X					X				3
	1			X					X		X			3
	1			X	X						X			3
	1				X			X		X				3
	4				X					X			X	12
	1				X		X			X				3
	1							X		X			X	3
	1			X					X	X				3
4	1	X		X						X			X	4
	1			X			X	X				X		4
	1			X				X		X		X		4
	1			X	X		X				X			4
	2				X			X		X			X	8
	1				X		X			X			X	4
5	1	X					X			X		X	X	5
	1	X		X						X		X	X	5
	1	X		X			X			X			X	5
	1		X			X		X		X			X	5
	1			X		X				X	X	X		5
	86													192

Average 2.23/Child

Appendix N

Paired Co-existence of Final Diagnoses
All Children Seen In Clinics

Diagnosis	Total Cases	Diagnosis											
		Cerebral Palsy	Cleft Palate	Cosmetic	Emotional Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech
Cerebral Palsy	23	23	1	17	3	7	4	0	0	16	1	2	10
Cleft Palate	12	1	12	4	7	0	2	4	0	5	5	0	10
Cosmetic	159	17	4	159	37	10	43	8	9	69	36	48	31
Personality Disturbance	118	3	7	37	118	8	14	13	9	51	15	22	41
Epilepsy	22	7	0	10	8	22	2	0	0	13	2	1	1
Eye	67	4	2	43	14	2	67	1	1	24	7	4	8
Hearing	43	0	4	8	13	0	1	43	2	15	3	5	17
Heart	43	0	0	9	9	0	1	2	43	6	8	4	2
Mental Retardation	148	16	5	69	51	13	24	15	6	148	10	30	54
Orthodontic	55	1	5	36	15	2	7	3	8	10	55	6	11
Orthopedic	69	2	0	48	22	1	4	5	4	30	6	69	12
Speech	93	10	10	31	41	1	8	17	2	54	11	12	93
No Handicap	69												

APPENDIX N

FREQUENCY OF CO-EXISTENT HANDICAPPING CONDITIONS IN FINAL DIAGNOSES ALL CHILDREN SEEN AT CLINICS

Number of Conditions Each Child	Number of Different Children	Cerebral Palsy	Cleft Palate	Cosmetic	Personality Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech	Total Number of Conditions
1	1	X												1
	14			X										14
	16				X									16
	4					X								4
	10						X							10
	22								X					22
	16									X				16
	8										X			8
	9											X		9
	8												X	8
	15							X						15
2	2	X		X										4
	1		X										X	2
	1		X							X				2
	1		X								X			2
	3			X						X				6
	11			X							X			22
	1			X					X					2
	1			X	X									2
	1			X									X	2
	16			X			X							32
	14			X								X		28
	1			X				X						2
	3				X		X							6
	11				X					X				22
	3				X				X					6
	1				X							X		2
	2				X			X						4
	10				X								X	20
	3				X	X								6
	2					X				X				4
	1						X					X		2
	1						X						X	2
	4						X			X				8
	1							X					X	2
	2							X		X				4
	1							X	X					2
	1								X			X		2
	3								X		X			6
	1									X		X		2
	11									X			X	22
	1										X		X	2
3	1	X			X		X							3
	1	X		X						X				3
	1	X				X				X				5
	1	X		X	X									3
	7			X						X		X		21
	5			X	X							X		15
	1			X				X					X	3
	1			X				X		X				3
	3			X						X			X	9
	9			X			X			X				27
	4			X			X				X			12
	2			X	X		X							6

APPENDIX N

Number of Conditions Each Child	Number of Different Children	Cerebral Palsy	Cleft Palate	Cosmetic	Personality Disturbance	Epilepsy	Eye	Hearing	Heart	Mental Retardation	Orthodontic	Orthopedic	Speech	Total Number of Conditions
	3			X						X	X			9
	2			X					X	X				6
	1			X	X					X				3
	1			X					X		X			3
	1			X	X						X			3
	1				X							X	X	3
	3				X					X		X		9
	1				X						X	X		3
	1				X			X					X	3
	2				X			X		X				6
	9				X					X			X	27
	1				X				X				X	3
	1				X		X			X				3
	1				X					X	X			3
	2				X	X				X				6
	1				X				X		X			3
	1			X			X						X	3
	3							X		X			X	9
	1							X			X		X	3
	1								X	X		X		3
4	4	X		X						X			X	16
	1	X		X		X	X							4
	4	X		X		X				X				16
	2		X		X			X					X	8
	1		X	X							X		X	4
	2		X		X						X		X	8
	1			X			X	X				X		4
	1			X				X		X		X		4
	2			X						X		X	X	8
	1			X	X							X	X	4
	1			X					X	X		X		4
	4			X	X					X		X		16
	1			X	X						X	X		4
	1			X			X			X			X	4
	1			X			X				X		X	4
	1			X		X				X			X	4
	3			X	X					X			X	12
	1			X			X		X	X				4
	1			X	X		X				X			4
	2			X	X					X	X			8
	1			X	X	X				X				4
	1			X	X	X					X			4
	1			X	X				X		X			4
	2				X			X		X			X	8
	2				X		X			X			X	8
	1				X				X	X			X	4
	1				X			X		X			X	4
5	1	X					X			X		X	X	5
	1	X		X						X		X	X	5
	1	X		X			X			X			X	5
	1	X		X	X						X		X	5
	1		X		X			X		X			X	5
	1		X	X	X			X					X	5
	1		X	X						X	X		X	5
	1		X	X	X		X			X				5
	3			X	X					X		X	X	15
	2			X	X		X			X		X		10
	1			X		X				X	X	X		5
	1			X	X				X		X	X		5
	1			X			X			X	X		X	5
	1			X	X	X	X			X				5
	1				X			X			X	X	X	5
	1				X			X		X		X	X	5
6	1	X		X						X	X	X	X	6
	375													849

Average 2.26/Child

APPENDIX O

Accuracy and Productivity of Presumptive Diagnoses

Degree of Accuracy Among Voluntary Reports

Presumptive Diagnosis	Diagnosis Confirmed
Total	63.4%
Epilepsy	89
Mental Retardation	79
Cosmetic	79
Personality Disorder	77
Orthopedic	77
Cleft Palate and Lip	75
Heart	67
Orthodontic	66
Cerebral Palsy	60
Speech	53
Hearing	45
Eye and Vision	40

Casefinding Effectiveness of Voluntary Reporting

Presumptive Diagnosis	Showed Any Handicap
Total	77.0%
Cleft Palate and Lip	100
Orthopedic	94
Cerebral Palsy	93
Mental Retardation	92
Cosmetic	91
Personality Disorder	91
Epilepsy	89
Speech	86
Heart	78
Orthodontic	73
Hearing	65
Eye and Vision	60

Degree of Accuracy Among Canvass Reports

Presumptive Diagnosis	Diagnosis Confirmed
Total	51.4%
Cleft Palate and Lip	100
Mental Retardation	90
Orthodontic	90
Heart	53
Personality Disorder	50
Speech	46
Orthopedic and Cerebral Palsy	42
Eye and Vision	38
Cosmetic	37
Epilepsy	33
Hearing	31

Casefinding Effectiveness of Canvass Reporting

Presumptive Diagnosis	Showed Any Handicap
Total	64.0%
Cleft Palate and Lip	100
Mental Retardation	100
Orthodontics	100
Emotional Disturbance	83
Heart	80
Orthopedic and Cerebral Palsy	73
Speech	71
Epilepsy	67
Hearing	66
Eye and Vision	52
Cosmetic	50

APPENDIX P

CASE-FINDING EFFECTIVENESS OF INTERVIEW QUESTIONS— FINAL DIAGNOSES MADE AT CLINICS ON CANVASS CASES

(See Questionnaire Appendix J)		(Column 1) Accuracy	(Column 2) Productivity	Sensitivity		(Col. 3)
Diagnostic Objective	Question Group and Number	%With Same Final Diagnosis	%With Any Positive Final Diagnosis	Number of Cases Missed by Questions (False Negatives)	Total Number With This Final Diagnosis	% Missed
Cleft Palate and Harelip	I.	50	50	0	1	0
	1	50	50			
Cerebral Palsy or Orthopedic Defect	II.	63	75	8	17	47
	2	54	69			
	3	67	83			
	4	50	75			
	5	50	100			
	6	67	100			
Hearing	III.	30	57	5	15	33
	7	36	55			
	8	15	50			
Speech	IV.	46	73	11	26	42
	9	67	100			
	10	25	100			
	11	57	81			
	12	56	62			
	13	42	67			
	14	67	100			
Eye	V.	26	43	6	21	28
	15	30	48			
	16	65	76			
	17	23	40			
	18	36	46			
	19	0	25			
Mental Retardation	VI.	73	87	26	33	78
	20	75	75			
	21	80	80			
	22	57	86			
	23	66	83			
Cosmetic	VII.	38	50	33	36	92
	24	33	50			
	25	50	50			
	26	—	—			
Orthodontic	VIII.	77	100	4	15	27
	27	50	100			
	28	77	100			
Epilepsy	IX.	20	67	0	3	0
	29	43	71			
	30	100	100			
	31	0	50			
	32	0	83			
Heart	X.	38	71	0	8	0
	33	62	77			
	34	10	60			
	35	14	43			
Personality	XI.	21	57	20	23	86
	36	27	54			
	37	33	100			
	38	0	50			

APPENDIX P

CASE-FINDING EFFECTIVENESS OF INTERVIEW QUESTIONS—FINAL DIAGNOSES MADE AT CLINICS ON CANVASS CASE

(See Questionnaire Appendix J)		Frequency		(Column 4)
Diagnostic Objective	Question Group and Number	Affirmative Response Rate Per 1000	Rank Order Within Group	Ratio of Affirmative Response Rate to Finally Estimated Prevalence
Cleft Palate and Harelip	I.	2		2.0
	1		—	
Cerebral Palsy or Orthopedic Defect	II.	15		1.0
	2		1	
	3		2	
	4		3	
	5		5	
	6		4	
Hearing	III.	47		2.5
	7		1	
	8		2	
Speech	IV.	36		1.3
	9		5	
	10		4	
	11		1	
	12		2	
	13		3	
	14		6	
Eye	V.	55		2.4
	15		2	
	16		3	
	17		1	
	18		4	
	19		5	
Mental Retardation	VI.	15		0.4
	20		1	
	21		4	
	22		3	
	23		2	
Cosmetic	VII.	7		0.2
	24		1	
	25		2	
	26		–	
Orthodontic	VIII.	15		1.0
	27		2	
	28		1	
Epilepsy	IX.	17		0.2
	29		1	
	30		4	
	31		3	
	32		2	
Heart	X.	20		0.5
	33		1	
	34		2	
	35		3	
Personality	XI.	14		0.5
	36		1	
	37		2	
	38		3	

APPENDIX Q

CLINIC FORMS

CLARKE AND OCONEE COUNTY SURVEY OF HANDICAPPED CHILDREN

CLINIC ROUTING SLIP

M **W**

F **N**

APPENDIX Q

SOCIAL SUMMARY

Date Filled Out

Patient's Name Date of Birth

Address: County

Volunteer
Sampling: House Canvas Name and address Family Physician:

Private
Physician or Others Treating Patient:

Information given by:

Social Status of Parents:
Married Single Widowed Divorced Separated

Members of Household	Relation Head	Age	Sex	Physical Condition	School	Institution	Occupation
Father							
Mother							
Children							
Others							

Other Households at This Address

Yes ☐ Rent ☐
No ☐ Number ☐ Home Own ☐

How Many Rooms Occupied by This Household (excluding bathroom)

On Patient	Hospitalization Insurance	Yes ☐ No ☐
	Surgical Benefits	Yes ☐ No ☐
	Medical Care	Yes ☐ No ☐
	Sick and Accident	Yes ☐ No ☐
	Dental Care	Yes ☐ No ☐

Data Collected By______________________________

APPENDIX Q

MEDICAL HISTORY

Name______ Age______ Sex______ Race______ Date______

History of Disability (Give date of illness or injury or when handicap first noted, affected part or extent of illness. Summarize treatment given and source):

FAMILY HISTORY:

Presence of: Tuberculosis______ Diabetes______ Syphilis______ Eczema______

Asthma______ Hay Fever______ Neurological conditions______ Other______

Is there a similar condition to child's in family? No______ Yes______. If yes, specify:

MOTHER'S PREGNANCIES:

Number of full term______ Premature______ Miscarriages______ Interruptions______

Ages of siblings: Dead (state cause)______

Living______

Condition of Mother during *THIS* Pregnancy: Well______ Toxemia______

Hypertension______ Acute disease______ Rh______ Radiation______

Other______.

HISTORY OF BIRTH:

Para______ of______ Consanguinity______ Yes______ No______

Delivered by______ Home______ Hospital______

Hours in labor: Normal______ Prolonged______ Precipitate______

Presentation: Cephalic______ Breech______ Other______

Type of Delivery: Normal______ Instruments______ Caesarian______

Cord About Neck______ Other______

Type of Analgesia______ Type of Anesthesia______

APPENDIX Q

Name______________________________

BIRTH:

Full Term_____ **Late**_____ **Multiple**_____ **Premature (mos.)**_____ **Weight**_____

Conditions at birth: Normal_____ **Blue Baby**_____ **Resuscitation necessary**_____

Weak_______ **Convulsions**_______ **Evidence of Head Trauma**_______ **Other**

injuries____________________ **Incubator**_______ **Time of Incubator**_______

Weak cry__________ **Jaundice**__________ **How long did it last?**__________

Other____________________________

DEVELOPMENTAL HISTORY:

Age (months and years) at which first:

Held head up ____________________

Rolled over ____________________

Sat alone ____________________

Stood alone____________________

Walked without support __________

Speech: Normal_______ **Delayed**_______ **Stuttering**_______ **Other**__________

Bowel control: Day_______ **Night**_______

Bladder control: Day_______ **Night**_______

Handedness: R or L now______________ **Age showing preference**______________

Any left handedness in family?____________________________________

GENERAL HEALTH AND FEEDING RECORD:

As infant, was he a feeding problem?_______ **Vomiter**_______ **Colic Baby**_____

Breast fed_______ **How long**_______ **Formula**______________ **CLO**_______

Constipated_________ **Trouble swallowing**_________

Present feeding schedule__________ **Feeding hours**__________ **Eating between meals**________________

Appetite: Excellent_______ **Good**_______ **Poor**_______

Check each past illness: Measles_______ **Whooping Cough**_______ **Chicken Pox**_______

Mumps_______ **Diphtheria**_______ **Scarlet Fever**_______ **Poliomyelitis**_______

Tonsilitis_______ **Colds**_______ **Otitis Media**_______ **Asthma**_______

Eczema_______ **Hay Fever**_______ **Rheumatic Fever**_______ **Other**_______

X — Yes O — No

Operations (check X or O, note date): Tonsillectomy and Adenoidectomy __________

Other____________________________

Accidents: ____

APPENDIX Q

Name________________________________

PRESENT STATUS:

Bright______ **Dull**______ **Apathetic**______

General Appearance: Average______ **Nervous**______ **Retarded**______

Talking: Normal______ **Words**______ **Sentences**______ **Intelligible**______
Unintelligible______

Toilet Trained: Bowels______ **Bladder**______

Feeds Self: With help______ **Alone**______

Dresses Self: With help______ **Alone**______

Understands: Everything______ **Less than normal**______ **Very little**______

Drooling: Yes______ **No**______

Eyes Involved: Squint: Yes______ **No**______ **Vision: Yes**______ **No**______

Hearing Involved: Yes______ **No**______

Trunk Involved: Yes______ **No**______

Legs Involved: Yes (R)____ **(L)**____ **No (R)**____ **(L)**____

Arms Involved: Yes (R)____ **(L)**____ **No (R)**____ **(L)**____

CONVULSIONS:

***(Describe character and frequency, if present. Note whether they occur with or without fever. Note if medication given and response to medication)**____________

____

____

____

____

***(Use Special Form for Convulsion History—Epilepsy Clinic.)**

Data Collected by:________________________________

APPENDIX Q

MEDICAL SOCIAL SERVICE

1. MSW

DATE______________

Patient's Name__________________Age______ Race_______ Sex_______

I *PATIENT*

A. Maturity	Good	Fair	Poor	Irrelevant-reason Unable to determine-reason
1. Poise				
2. Relat'nship with parents				
3. Relat'nship with siblings				
4. R'ship with other child'n				
5. Relat'nship with teacher				

Remarks:

B. Attitude Toward Handicap	Good	Fair	Poor	Irrelevant-reason Unable to determine-reason
1. Understanding of cond'n				
2. Desire for treatment				
3. Attitude tow'd disability				
(1) Passivity				
(2) Rage				
(3) Shame				
(4) Denial				
(5) Guilt				
(6) Ability to accept disability in its reality				
(7) Ability to accept reasonable goals in:				
(a) play				
(b) school				
(c) employment				

Remarks:

Summation of Item I:

APPENDIX Q

Name

II *FAMILY*

A. Parents

1. Both parents in home		
2. Father only		
3. Mother only		
4. Stepfather		
5. Stepmother		
6. Relatives		
7. Foster home		
8. Institution		

Remarks:

B. Economic situation	Good	Fair	Poor	Irrelevant or Unable to determine-reasons
1. Income				
2. Housing				

Remarks:

C. Attitude tow'd disability	Good	Fair	Poor	Irrelevant or Unable to determine-reasons
1. Passivity				
2. Rage				
3. Shame				
4. Denial				
5. Guilt				
6. Ability to accept disability in its reality				
7. Ability to accept reasonable goals in:				
(a) play				
(b) school				
(c) employment				
8. Impact of disab'ty upon:				
(a) rela'ship of parents				
(b) siblings				

Remarks:

Summation of Item II:

APPENDIX Q

Name________________________

III *EDUCATION*	Past	Present	Needed
A. Regular class			
B. Regular class—modified program			
C. Special class			
D. Home instruction			
E. Hospital instruction			
F. Vocational instruction			
1. Trade school			
2. Apprentice			
G. Special school			
1. Blind			
2. Deaf			
3. Speech			
4. Mental defective			
H. Reason for present lack of education			
1. Not educable			
2. Not of school age			
3. Other			
(a) No faciilties			
(b) Lack of transportation			
(c) Temporary medical reasons			
(d) Other—Itemized			

J. Appraisal	Good	Fair	Poor	Unable to determine-reason
1. Progress in school				
2. Academic rating				

Summation of Item III:

APPENDIX Q

Name____________________

IV. *EMPLOYMENT*

1. Present employment
   - (a) By whom employed?
   - (b) In what capacity?
   - (c) How long on present job?
   - (d) Monthly wage

2. Past employment	First job	Second job	Third job	Fourth job
(a) Name of employer				
(b) How long employed				
(c) Reason for change				

3. Recommendations for job placement

(a) Regular placement		
(b) Special placement		
(c) Sheltered workshop		

Summation of Item IV:

APPENDIX Q

Name________________________

V. *FACTORS AFFECTING SOCIAL ACCEPTABILITY*

	Slight	Moderate	Severe	
1. Accessory movements				
2. Bowel and bladder control				
3. Braces				
4. Bragging				
5. Convulsions				
6. Condition of teeth				
7. Crutches				
8. Discharge from ears				
9. Drooling				
10. Emotional disturbance				
11. Eyes				
12. Gait				
13. Grimaces				
14. Hearing				
15. Irritability				
16. Jaw deformity				
17. Mental retardation				
18. Obesity				
19. Posture				
20. Prosthesis—arm, leg				
21. Ptosis				
22. Scars visible				
23. Speech disturbance				
24. Squint or frown				
25. Submissiveness				
26. Timidity				
27. Very thin				
28. Other—Itemized				

Summation of Item V:

APPENDIX Q

Name______________________________

VI. *TYPES OF SERVICES NEEDED*

	Intensive	Minimal
A. Child Guidance Service		
B. Custodial Care		
C. Medical Social Case Work Services		
D. Medical Social Consultation to		
1. Child Guidance team		
2. Child Welfare Agencies		
3. Courts		
4. Day nursery		
5. Employer		
6. Institutional personnel		
7. Occupational therapist		
8. Other social agencies		
9. Physical therapist		
10. Physician		
11. Public Health Nurse		
12. Recreation personnel		
13. School social worker		
14 Speech therapist		
15. Teacher		
16. Vocational counselor		
E. Nursery School Placement		
F. Vocational Counseling		

Summation of Item VI:

Signed______________________________

Medical Social Worker

APPENDIX Q

PSYCHOLOGICAL APPRAISAL

Page 1

Name______________________________ **Date**_______________

Psychometrics**: Evaluation (Name of Tests done and Results)**

Remarks:

____

Psychologist

APPENDIX Q

PSYCHOLOGICAL APPRAISAL

Page 2

Name______________________________ Date_______________

			(Check)		
	Unknown or not relevant	**Fair**	**Poor**	**Good**	**Unusually good**
Patient					
Personality					
Security					
Stability					
Flexibility					
Capacity for affect					
Attitude toward handicap					
Understands facts					
Reasonable acceptance (Resentment, shame, guilt)					
Reasonable goals					
Readiness to build and compensate					
Remarks					
***Family* (parents)**					
Attitude toward situation					
Understand facts					
Reasonable acceptance (resentment, shame, guilt					
Reasonable goals					
Readiness to build and compensate					
Attitude toward patient					
Balance in protection					
Affection					

APPENDIX Q

PEDIATRIC EXAMINATION

NAME______________________________ DATE____________

Temperature__________ Pulse__________ Respiration__________

Height____________________ Ins.____________________

Weight____________________ Lbs.____________________

GENERAL CONDITION: Good Fair Poor Nutrition__________

SKIN: Normal Other______________________________

HEAD: Normal Other__________ Circumference__________

EYES: Normal Other______________________________

NOSE: Clear Other______________________________

MOUTH: Normal Other______________________________

TONSILS: Normal Large Small Buried Infected
Cryptic Removed

TEETH: Good Caries No. unfilled cavities__________
Occlusion____________________

GLANDS: Normal Enlarged ANT. Cervical POST. Cervical Other________

CHEST: Normal Other______________________________

LUNGS: Normal Other______________________________

HEART: Normal Other______________________________

ABDOMEN: Normal Other______________________________

GENITALS: Normal Other______________________________

EXTREMITIES: Normal Other______________________________

SPINE: Normal Other______________________________

REFLEXES: Normal Other______________________________

Pediatric Diagnosis and Recommendations:______________________________

____

____

______________________________ M.D.
Pediatrician

APPENDIX Q

EPILEPSY

DATE_______________**NAME**________________________________

DIAGNOSIS AND RECOMMENDATIONS:

______________________________**M.D.**
NEUROLOGIST

APPENDIX Q

SEIZURE HISTORY FORM

NAME________________________________ Age______ Sex________

PAST HISTORY: Prenatal abnormalities____________________

CNS Birth injuries____________________________________

Head injuries ____

Encephalitis ____

Brain tumor ____

Family history of seizures? Maternal____________ Paternal__________

Brief account of these (relation, age at onset, nature of seizures, age when attacks ceased): ____

____

____

____

Patient's seizures: Age of onset (note particularly any in neonatal period):

____

Description of attack

I. Initial event:

A. Unconsciousness_____, __with chewing____with head turning_____

B. Motor phenomena

1. Focal twitching (hand, face, etc.)__________Location__________

____

2. Speaking attempts ____________________________________

3. Head and eye turning__________To right_______To left________

C. Sensory phenomena

1. Numbness, tingling, etc.____________Location______________

2. Visual (lights, color, forms)__________Describe____________

____

3. Sound (roaring)_______________________________________

4. Dizziness____

5. Odor__________Describe_____________________________

6. Taste__________Describe_____________________________

D. Visceral disturbances

1. Epigastric, abdominal sensations__________________________

____

Any progression?____

2. Palpitation____

3. Chest sensations______________________________________

E. Physical phenomena

1. Hallucinations (dreams, memories, music, voices, etc.):________

____

____

2. Illusions (familiarity of situation, "out of the world", being too close or too far away, sense of unreality, things too large, too small; patient feels he is spectator as at a play):__________

____

____

3. Feeling of fright______________________________________

4. Forced thinking (same thought recurs over and over)________

____

5. Aphasia (unable to speak, speaks jargon, stammers)__________

____

6. Automatic behavior (performs complicated, apparently purposeful activity but without understanding it and is *out of contact* at the time, amnesic for the events) : ______

Other ______

II. Tonic phase, if any (drawing) : 1. Duration ______, 2. Cry ______, 3. Cyanosis ______, 4. Salivation ______, 5. Incontinence bladder ______ bowel ______, 6. Parts first affected, progression ______

III. Clonic phase, if any: 1. Duration ______, 2. Part first affected, progression ______
3. Tongue biting ______

IV. Post-seizure phenomena:
1. Drowsiness ______ Duration ______
2. Confusion ______ Duration ______
3. Headache ______ Duration ______
4. Speech disturbance ______ Duration ______
5. Localized weakness ______
6. Automatic or bizarre behavior, violence ______
7. Amnesia ______

V. Frequency of attacks: ______

VI. Diagnostic studies already performed:
1. Neurological examination ______ When ______
2. Brain waves ______ When ______ Where ______
3. X-rays of skull ______ When ______ Where ______
4. Pneumoencephalogram ______ When ______ Where ______
5. Arteriogram ______ When ______ Where ______
6. Other ______

VII. Medication
1. Phenobarbital ______ Dose ______ Effect ______ Duration of use ______
2. Dilantin ______ Dose ______ Effect ______ Duration of use ______
3. Tridione ______ Dose ______ Effect ______ Duration of use ______
4. Paradione ______ Dose ______ Effect ______ Duration of use ______
5. Mesantoin ______ Dose ______ Effect ______ Duration of use ______
6. Combinations of above ______
7. Source of medication: M.D. (specialty, if any) ______
Mail order house ______

VIII. Any surgical treatment of seizures? ______

APPENDIX Q

HEART DISEASE AND RHEUMATIC FEVER

NAME______________________________DATE________________

1. FAMILY —
   (incidence of Heart Disease, Rheumatic Fever, Geographic location of residence during patient's life time)

2. HEART —
   (Respiratory infections, joint pains, chorea, febrile periods, origin, course, treatment, prophylaxix)

3. CARDIO VASCULAR EXAM. —
   (Heart, lungs, blood pressure, pulse, veins) (EKG. fluroscopy, other laboratory tests?)

4. DIAGNOSIS AND RECOMMENDATIONS:

______________________________M.D.
CARDIOLOGIST

ORTHODONTIA

NAME______________________________DATE________________

DIAGNOSIS AND RECOMMENDATIONS:

(Dento-Facial Deformities—Occlusion—type and severity)

______________________________DDS
ORTHODONTIST

APPENDIX Q

ORTHOPEDIC

NAME________________________________DATE______________

ORTHOPEDIC EXAMINATION:
DIAGNOSIS AND RECOMMENDATIONS:

____________________________________M.D.
ORTHOPEDIC SURGEON

* * *

NEUROLOGICAL EXAMINATION:
DIAGNOSIS AND RECOMMENDATIONS:

____________________________________M.D.
NEUROSURGEON

PHYSICAL THERAPY

NAME________________________________DATE______________

COMMENTS:
(See Muscle Texts—Achievement Tests, etc. Attached)

____
PHYSICAL THERAPIST

APPENDIX Q

FUNCTIONAL ACTIVITY TEST

Name____________________________ Date of onset__________

Birth Date____________________________

Involvement (Arms______ (Trunk______ (Legs______

Diagnosis____________________________

DATE________________

	Mark	Comment
APPARATUS		
Crutches, braces, etc.		
STANDING		
Habitual position		
Time		
Free standing		
Time		
WALKING		
Level surface		
Up hill		
Down hill		
Sideways		
Backward		
Turn		
Stop under control		
Walk without brace:		
Indoor		
Outdoor		
Gait (describe)		

MARKING:

N—Normal
X—Adequate to essential needs
L—Limited in speed, balance, endurance
MA—Mechanical aid—wall, railing, chair
PA—Person helping but not carrying
O—Impossible

Comments:
Describe ways of doing things if unusual.

DATE________________

	Mark	Comment
GEN. ACTIVITIES		
Stairs:		
Up		
Down		
Chair:		
Sit		
Stand		
Pull up		
Rise from floor		
Manage doors		
Auto: In and Out		
Step up on curb		
Cross street alone		
Use hands over head		
Pick up from floor		
Telephone		
Carry parcel:		
Indoors		
Traveling		
Write, print, type		
Hold a book		
SELF CARE		
Feed self		
Toilet		
Bathe		
Brush teeth		
Comb hair		
Dress self		

VISION AND EYE

NAME____________________________ DATE____________

Results of Vision Test:

____
VISION TESTING TECHNICIAN

____

DIAGNOSIS AND RECOMMENDATIONS:
(Eyes—appearance, vision, refraction, fundus, external muscles, lids, conjunctivia, lens)

____________________________M.D.
OPHTHALMOLOGIST

APPENDIX Q

CEREBRAL PALSY

Name______________________________ Date________________

	Normal	Good	Fair	Poor	Reflexes	L	R
GENERAL					K.J.		
Muscular Developm't					A.J.		
Voluntary Motion					Babinski		
Coordination					Clonus		
Head Control					Cremasterics		
Trunk Function					Abdominals		
Balance					Biceps		
Leg Function					Triceps		
Arm Function					Periostecral		
Speech					T.N.R.		
Facial Control							
Sight							
Hearing							

Gait______________________________

Eyes
Eye Motions________
Nystegmus________
Strabismus________
Pupils________

Tongue________
Extension________
Retraction________
Lateral________
Upward________
Downward________

Contractures

	R	L			
Heel Cords			Elbows		
Knees			Wrist Flexors		
Hip Abductors			Pronators		
Ant. Rotators			Fingers		
Flexors			Others		

Classification	Rt. Arm	Lt. Arm	Rt. Leg	Lt. Leg	Trunk	Face	Speech
Athetosis							
Spasticity							
Rigidity							
Ataxia							
Tremor							

APPENDIX Q

CEREBRAL PALSY — PAGE 2

Name________________________________ **Date**________________

DIAGNOSIS and RECOMMENDATIONS:
(Braces, shoes, equipment, O.T., P.T., Drugs, etc.)

____________________________**M.D.**
Orthopedic Surgeon

DIAGNOSIS and RECOMMENDATIONS:

____________________________**M.D.**
Neurosurgeon

APPENDIX Q

SPEECH ANALYSIS

NAME________________________________ **DATE**______________

I. CONFIRMATION:

Adequate______________ **Inadequate**______________

II. TYPE AND SEVERITY OF PROBLEM

Characteristics

	Degree			
	Slight	**Moderate**	**Severe**	**Not Relevant**
1. Articulation				
Substitutions				
Omissions				
Distortions				
2. Voice				
Loudness				
Quality				
Pitch				
Rate				
3. Stuttering				
4. Delayed Speech				
5. Other				

6. SPECIAL PROBLEMS RELATED TO SPEECH

a. Cerebral Palsy__________	**Oral Inadequacy**
b. Cleft Palate__________	**a. Structure**__________
c. Mental Retardation__________	**b. Movement**__________
d. Emotional Disturbances__________	**Hearing Loss**__________
e. Others__________	

OVER-ALL SEVERITY: Slight Moderate Severe Cannot be Estimated
Reason:

III. RECOMMENDATIONS:

Speech Therapy:________ **Frequency:**________ **Length of each session:**________

Probable length of therapy:______________

Other:

Remarks:

____
Speech Correctionist

APPENDIX Q

HEARING

Name______________________________ Date_______________

RESULTS OF AUDIOMETRIC TEST:

(See attached form)

____
Audiometric Technician

DIAGNOSIS AND RECOMMENDATIONS:
(Ears, canals, drums, mastoids)

___________________________M.D.
Otologist

PERSONALITY DEFECT — PAGE 1

Name______________________________ Date_______________

Psychological Tests Used:

Diagnosis and Recommendations:

APPENDIX Q

PERSONALITY DEFECT — PAGE 2

Name____________________________ Date________________

	(Check)			
	None	Average	Above Average	Extreme
Seclusiveness and Preoccupation				
Distractability				
Bizarre Behavior (including speech)				
Hyperactivity				
Irritability				
Uncooperativeness				
Disturbance of Conceptual Ability				
Disturbance of Perceptual Ability				
Anxiety				
Generalized Confusion				
Affective Extremes or Inappropriateness				
Behavioral Regression (including speech)				
Bewilderment				
Inability to Relate				
Hostility				

____
Psychologist

APPENDIX Q

DIAGNOSTIC SUMMARY SHEET

HANDICAP PRESENT Yes ☐ No ☐

DIAGNOSES OF HANDICAPS

Primary

Associated
Secondary

Other Defects present (not handicapping)
List:

Georgia Department Public Health
Central Statistical Unit
March 8, 1954

SCALES

Assessment of Functional Disability

Primary responsibility of:		None	Slight	Moderate	Severe	Irrelevant or cannot be estimated. Reason.	
M.D. or Dentist	Physical disability						
	Walking						
	Effective use of upper extremities						
	Limitation of activity (e.g., cardiac)						
	Cosmetic						
	Function of teeth						
	Uncontrollable seizures						
	Hearing loss in better ear						
	Visual acuity loss in better eye						
Speech Therap.	Speech impairment						1° or 2°?
Psychol.	Mental retardation						
Social Worker, Psychol. and Psychiat.	Psychological maladjustment (personal)						1° or 2°?
	Maladjustment of rest of family						
Staff	Social disability (society's non-acceptance)						
	Vocational limitation						

		Regular	Modified	Special Day	Home	Hospital	Institution	None
	Education (present potential placement)							
SMW								

APPENDIX Q

CARD IV—SPECIAL QUESTIONNAIRE CARD

Columns		Code Block and Item
1	☐	Card No.
2 - 5	☐ ☐ ☐ ☐	Family No.
6 - 9	☐ ☐ ☐ ☐	Case No.
10 - 11	☐ ☐	Age of Case
		I Hairlip and Cleft Palate (1)
12	☐	1
		II Cerebral Palsy or Orthopedic Defect (5)
13	☐	1
14	☐	2
15	☐	3
16	☐	4
17	☐	5
		III Poor Hearing and Deafness (2)
18	☐	1
19	☐	2
		IV Speech Defects
20	☐	1
21	☐	2
22	☐	3
23	☐	4
24	☐	5
25	☐	6
		V Eye Defects (5)
26	☐	1
27	☐	2
28	☐	3
29	☐	4
30	☐	5
		VI Mental Retardation (6)
31	☐	1
32	☐	2
33	☐	3
34	☐	4
35	☐	5
36	☐	6
		VII Cosmetic Defect (3)
37	☐	1
38	☐	2
39	☐	3
		VIII Orthodontic Defect (2)
40	☐	1
41	☐	2

APPENDIX Q

IX Epilepsy (4)

42	☐	1
43	☐	2
44	☐	3
45	☐	4

X Heart Condition (3)

46	☐	1
47	☐	2
48	☐	3

XI Personality Defects (3)

49	☐	1
50	☐	2
51	☐	3

Presumptive Diagnosis (From Master Card)

52	☐	1)	
53	☐	2)	
54	☐	3)	
55	☐	4)	
56	☐	5)	
57	☐	6)	Defect Codes
58	☐	7)	(Degree of Defect,
59	☐	8)	1° or 2°)
60	☐	9)	
61	☐	0)	
62	☐	R)	

Final Clinic Diagnosis (From Diagnostic Sheet)

63	☐	1)	
64	☐	2)	
65	☐	3)	
66	☐	4)	
67	☐	5)	
68	☐	6)	Defect Codes
69	☐	7)	(Degree of defect,
70	☐	8)	1° or 2°)
71	☐	9)	
72	☐	0)	
73	☐	R)	

Appendix Q

Please complete this form and return to: Georgia Department of Health
Central Statistical Unit
12 Capitol Square
Atlanta, Georgia

Name of Institution ______________________________

To our best knowledge, there were no children from Clarke or Oconee Counties in this institution during February or March, 1954 ☐

The information below applies to children from Clarke and Oconee Counties who were in this institution during February or March, 1954 ☐

Name	Birthday	Address	Name of father	Name of Mother

Person Completing Form:
Name ____________________ Position ____________________ Date ________________

Sampled__________

MASTER ALPHABET

Name Age Sex Color County

Father's Name: Mother's Name: Address:

Directions for locating: Phone:

Name of Physician:

Sources of Referral: Canvas: Voluntary: Parents Professional (Identify)

Other (Identify)

Cross Filing: Voluntary Defects Canvas Defects

Primary: Primary:
Secondary: Secondary:

Final Diagnosis:
Primary__________
Secondary__________

No Diagnosis__________

DEFECT CARD

Name Age Sex Color County

Father's Name: Mother's Name: Address:

Name of Physician:

DEFECTS:	PRIMARY	SECONDARY
1. Harelip and cleft palate		
2.(a) Cerebral Palsy		
(b) Orthopedic		
3. Poor hearing and deafness		
4. Speech		
5. Eye		
6. Mental retardation		
7. Cosmetic		
8. Orthodontic		
9. Epilepsy		
10. Heart condition		
11. Personality defects		

DEFECT CARD

Name Age Sex Color County

Father's Name: Mother's Name: Address:

Name of Physician:

DEFECTS:	PRIMARY	SECONDARY
1. Harelip and cleft palate		
2.(a) Cerebral Palsy		
(b) Orthopedic		
3. Poor hearing and deafness		
4. Speech		
5. Eye		
6. Mental retardation		
7. Cosmetic		
8. Orthodontic		
9. Epilepsy		
10. Heart condition		
11. Personality defects		

APPENDIX R

Assessment of Functional Disability

Aspects to be Considered for Each Diagnostic Condition

General Headings

1. Physical disability (specified as to part of body)—none, slight, moderate, severe.
2. Speech defect—none, slight, moderate, severe.
3. Mental retardation—none, borderline, moderate, severe.
4. Psychological maladjustment (personal)—none, slight, moderate, severe.
5. Maladjustment of rest of family (in respect to patient's handicap) —none, slight, moderate, severe.
6. Social disability (society's non-acceptance)—none, slight, moderate, severe.
7. (School-age children only) Educational placement (present potential)—regular, modified, special, home, hospital, institutional, none.
8. (16 years of age or over) Vocational limitation (potential)—none, slight, moderate, severe.

Cerebral Palsy

Physical disability

Cosmetic (movements, posture, drooling)
Body balance and control
Effective use of upper extremities
Walking
Vision
Hearing

Speech defect
Mental retardation
Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(School-age children only) Educational placement (present potential)
(16 years of age or over) Vocational limitation (potential)

Cleft Palate or Lip

Physical disability

Cosmetic (lips, nose, teeth, jaw)
Function of teeth
Hearing

Speech defect
Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(School-age children only) Educational placement (present potential)
(16 years of age or over) Vocational limitation (potential)

APPENDIX R

Cosmetic Defect

Physical disability

Cosmetic

Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(16 years of age or over) Vocational limitation (potential)

Emotional Disturbance

Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(School-age children only) Educational placement (present potential)
(16 years of age or over) Vocational limitation (potential)

Epilepsy

Physical disability

Uncontrollable seizures

(grand mal
None, occasional, frequent, very frequent (petit mal
(psychomotor

Mental retardation
Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(School-age children only) Educational placement (present potential)
(16 years of age or over) Vocational limitation (potential)

Eye Conditions

Physical disability

Visual acuity in better eye
Cosmetic

Mental retardation
Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(School-age children only) Educational placement (present potential)
(16 years of age or over) Vocational limitation (potential)

Hearing Impairment

Physical disability

Hearing loss in better ear

Speech defect
Mental retardation
Psychological maladjustment (personal)
Maladjustment of rest of family
Social disability (society's non-acceptance)
(School-age children only) Educational placement (present potential)
(16 years of age or over) Vocational limitation (potential)

APPENDIX R

Heart Disease or Rheumatic Fever

- **Physical disability**
  - **Limitation in activity (use American Heart Association classification)**
  - **Limiting effect of infections or measures necessary to prevent infections**
- **Psychological maladjustment (personal)**
- **Maladjustment of rest of family**
- **Social disability (society's non-acceptance)**
- **(School-age children only) Educational placement (present potential)**
- **(16 years of age or over) Vocational limitation (potential)**

Mental Retardation

- **Mental retardation**
- **Speech defect**
- **Behavior disturbance**
- **Maladjustment of rest of family**
- **Social disability (society's non-acceptance)**
- **(School-age children only) Educational placement (present potential)**
- **16 years of age or over) Vocational limitation (potential)**

Orthodontic (Dento-facial) Handicap

- **Physical disability**
  - **Cosmetic**
  - **Malocclusion**
  - **Function of teeth**
- **Psychological maladjustment (personal)**
- **Maladjustment of rest of family**
- **Social disability (society's non-acceptance)**
- **(16 years of age or over) Vocational limitation (potential)**

Orthopedic Handicap

- **Physical disability**
  - **Use of upper extremities**
  - **Walking**
  - **Head, neck and/or trunk control**
  - **Cosmetic**
- **Psychological maladjustment (personal)**
- **Maladjustment of rest of family**
- **Social disability (society's non-acceptance)**
- **(School-age children only) Educational placement (present potential)**
- **(16 years of age or over) Vocational limitation (potential)**

Speech Defect

- **Specific disability in speech—slight, moderate,, severe**
  - **Intelligibility—normal, good, fair, poor, unintelligible**
- **Mental retardation**
- **Psychological maladjustment (personal)**
- **Maladjustment of rest of family**
- **Social disability (society's non-acceptance)**
- **(School-age children only) Educational placement (present potential)**
- **(16 years of age or over) Vocational limitation (potential)**

APPENDIX S

Criteria for Society's Non-acceptance of Each Handicapping Condition

Cerebral palsy: Facial appearance and grimaces, gait, body movements, speech, mental capacity, behavior, convulsions.

Cleft palate or lip: Speech, facial appearance.

Cosmetic defect: Appearance.

Epilepsy: Type, severity and frequency of convulsive episodes, mental retardation, behavior.

Eye abnormality or impairment of vision: Appearance, severity of visual defect.

Hearing impairment: Speech, hearing.

Heart abnormality or rheumatic fever: Usually not affected.

Mental retardation: Mental capacity, behavior disturbance or special emotional manifestations of brain injury, appearance, speech.

Orthodontic abnormality: Speech, appearance.

Orthopedic or neuromuscular disturbance: Appearance, gait, limitation in activity.

Personality disturbance: Nature and severity of behavior disturbance, especially in respect to aggressiveness.

Speech impairment: Intelligibility and unpleasantness of speech.

Coexistent Disabilities

Disability Scores for "Primary" Diagnoses

All Children Seen At Clinics

Diagnosis			Number of Children	Disabilities														
				Walking	Use of Upper Extremities	Limitation of General Activity	Cosmetic Defect	Function of Teeth	Seizures	Hearing Impairment	Visual Acuity	Speech	Mental Retardation	Personality Disturbance	Family Maladjustment to Handicap	Society's Non-acceptance	Vocational Limitation	Educational Disability or Special Educational Needs
Cerebral Palsy	Only Primary	Total	16	32	28	0	26	0	12	3	7	27	31	6	12	31	18	
		Average		2.0	1.75		1.62		0.75	0.19	0.44	1.69	1.94	0.37	0.75	1.94	1.12	
	All with this Primary	Total	24	48	39	0	44	2	13	3	8	39	47	9	19	49	27	
		Average		2.0	1.62		1.83	0.08	0.54	0.12	0.33	1.62	1.95	0.37	0.79	2.04	1.12	
Cleft Palate	Only Primary	Total	6	0	0	0	7	7	0	2	0	11	4	9	4	9	2	
		Average					1.17	1.17		0.33		1.83	0.67	1.5	0.67	1.5	0.33	
	All with this Primary	Total	12	0	0	0	19	15	0	6	2	21	13	18	8	21	7	
		Average					1.58	1.25		0.5	0.17	1.75	1.08	1.5	0.66	1.75	0.58	
Cosmetic	Only Primary	Total	16	1	0	0	23	0	0	0	0	0	0	4	2	8	2	
		Average		0.06			1.44							0.25	0.125	0.5	0.125	
	All with this Primary	Total	27	5	2	0	41	5	0	8	0	12	12	11	9	24	3	
		Average		0.18	0.07		1.51	0.18		0.29		0.44	0.44	0.40	0.33	0.89	0.11	
Emotional Disturbance	Only Primary	Total	18	0	0	0	0	0	0	0	0	1	0	40	40	29	8	
		Average										0.05		2.22	2.22	1.61	0.44	
	All with this Primary	Total	30	0	0	0	7	2	0	2	5	6	11	62	57	45	23	
		Average					0.23	0.06		0.06	0.16	0.2	0.36	2.19	1.9	1.5	0.76	
Epilepsy	Only Primary	Total	7	0	0	0	0	0	10	0	0	0	1	4	4	5	2	
		Average							1.14				0.14	0.57	0.57	0.71	0.28	
	All with this Primary	Total	12	0	0	0	2	2	20	0	0	0	7	13	14	12	7	
		Average					0.16	0.16	0.83				0.58	1.08	1.16	1.0	0.58	
Eye	Only Primary	Total	28	0	0	0	28	0	0	0	30	2	0	7	4	17	7	
		Average					1.0				1.07	0.07		0.24	0.14	0.61	0.24	
	All with this Primary	Total	65	5	2	1	71	16	1	1	73	15	38	29	21	56	30	
		Average		.07	.03	.01	1.08	0.24	.01	.01	1.11	0.23	0.58	0.44	0.32	0.85	0.46	

Coexistent Disabilities
Disability Scores for "Primary" Diagnoses

All Children Seen At Clinics

Diagnosis			Number of Children	Disabilities														
				Walking	Use of Upper Extremities	Limitation of General Activity	Cosmetic Defect	Function of Teeth	Seizures	Hearing Impairment	Visual Acuity	Speech	Mental Retardation	Personality Disturbance	Family Maladjustment to Handicap	Society's Non-acceptance	Vocational Limitation	Educational Disability or Special Educational Needs
Hearing	Only Primary	Total	18	0	0	0	0	0	0	23	0	6	0	2	3	6	1	
		Average								1.28		0.33		0.11	0.17	0.33	.05	
	All with this Primary	Total	40	1	0	2	21	13	0	61	1	35	25	19	13	34	18	
		Average		.025		.05	0.52	0.32		1.52	.025	0.87	0.62	0.47	0.32	0.85	0.45	
Heart	Only Primary	Total	25	0	0	8	1	1	0	0	0	1	1	11	11	0	4	
		Average				0.32	0.04	0.04				0.04	0.04	0.44	0.44		0.16	
	All with this Primary	Total	43	3	2	20	16	9	0	2	2	9	12	23	18	12	17	
		Average		0.07	0.04	0.46	0.37	0.21		0.04	0.04	0.21	0.28	0.53	0.41	0.28	0.39	
Mental Retardation	Only Primary	Total	45	12	9	0	19	0	3	0	3	29	90	33	35	76	64	
		Average		0.27	0.2		0.42		0.07		0.07	0.64	2.0	0.73	0.78	1.69	1.42	
	All with this Primary	Total	132	42	24	2	107	22	16	26	32	99	238	102	83	199	164	
		Average		0.31	0.18	0.01	0.8	0.16	0.12	0.19	0.24	0.74	1.78	0.76	0.62	1.49	1.23	
Orthodontic	Only Primary	Total	19	0	0	0	27	31	0	0	1	1	0	5	3	3	0	
		Average					1.42	1.63			0.05	0.05		0.26	0.16	0.16		
	All with this Primary	Total	49	9	10	10	69	74	5	6	7	17	24	25	21	32	22	
		Average		0.18	0.2	0.2	1.38	1.48	0.1	0.12	0.14	0.34	0.48	0.5	0.42	0.64	0.44	
Orthopedic	Only Primary	Total	28	39	5	0	39	0	0	0	0	0	1	10	11	24	17	
		Average		1.39	0.18		1.39						.03	0.35	0.39	0.86	0.61	
	All with this Primary	Total	65	69	21	2	93	12	0	9	4	27	51	36	35	74	65	
		Average		1.05	0.32	0.03	1.42	0.18		0.13	0.06	0.41	0.78	0.55	0.53	1.13	0.99	
Speech	Only Primary	Total	14	0	0	0	0	0	0	0	0	21	1	8	7	10	2	
		Average										1.5	0.07	0.57	0.5	0.71	0.14	
	All with this Primary	Total	37	4	2	0	16	10	0	2	5	61	13	27	16	38	8	
		Average		0.11	0.05		0.43	0.27		0.05	0.13	1.64	0.35	0.73	0.43	1.02	0.21	
Diagnosed as no Handicap			69	0	0	0	8	9	0	0	1	1	0	3	1	1	0	

Appendix T

Coexistent Disabilities
Paired Co-existence of Functional Disabilities

All Children Seen In Clinics

Disabilities	Total Cases	Disabilities													
		Walking	Use of Upper Extremities	Limitation of General Activity	Cosmetic Defect	Function of Teeth	Seizures	Hearing Impairment	Visual Acuity	Speech	Mental Retardation	Personality Disturbance	Family Maladjustment to Handicap	Society's Non-acceptance	Vocational Limitation
Walking	68	68	31	1	55	1	7	2	4	25	37	21	30	48	26
Use of Upper Extremities	35	31	35	0	32	1	7	1	3	23	25	11	18	32	17
Limitation of General Activity	14	1	0	14	3	4	0	1	1	2	2	7	5	2	4
Cosmetic Defect	178	55	32	3	178	50	8	12	26	55	75	66	57	116	57
Function of Teeth	62	1	1	4	50	62	1	6	5	19	15	23	16	27	11
Seizures	19	7	7	0	8	1	19	1	3	7	12	10	16	15	8
Hearing Impairment	44	2	1	1	12	6	1	44	2	22	17	16	12	22	10
Visual Acuity	48	4	3	1	26	5	3	2	48	9	22	19	13	28	13
Speech	113	25	23	2	55	19	7	22	9	113	72	54	49	92	39
Mental Retardation	158	37	25	2	75	15	12	17	22	72	158	78	69	130	83
Personality Disturbance	163	[illegible]	11	7	66	23	10	16	19	54	78	163	106	119	65
Family Maladjustment to Handicap	141	30	18	5	57	16	16	12	13	49	69	106	141	103	53
Society's Non-acceptance	216	48	32	2	116	27	15	22	28	92	130	119	103	216	97
Vocational Limitation	112	26	17	4	57	11	8	10	13	39	83	65	53	97	112

Appendix T

Paired Co-existence of Functional Disabilities

Canvass Cases Seen In Clinics

Disabilities	Total Cases	Disabilities													
		Walking	Use of Upper Extremities	Limitation of General Activity	Cosmetic Defect	Function of Teeth	Seizures	Hearing Impairment	Visual Acuity	Speech	Mental Retardation	Personality Disturbance	Family Maladjustment to Handicap	Society's Non-acceptance	Vocational Limitation
Walking	11	11	4	0	10	1	1	0	0	6	8	3	6	7	5
Use of Upper Extremities	5	4	5	0	5	0	1	0	0	5	5	0	3	5	4
Limitation of General Activity	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Cosmetic Defect	44	10	5	0	44	16	1	2	9	12	21	14	14	22	13
Function of Teeth	19	1	0	0	16	19	0	1	2	5	5	7	4	7	2
Seizures	2	1	1	0	1	0	2	0	0	1	1	0	1	1	1
Hearing Impairment	15	0	0	0	2	1	0	15	1	6	6	5	4	7	3
Visual Acuity	13	0	0	0	9	2	0	1	13	1	6	4	3	5	4
Speech	27	6	5	0	12	5	1	6	1	27	18	10	13	21	8
Mental Retardation	34	8	5	0	21	5	1	6	6	18	34	17	16	25	14
Personality Disturbance	32	3	0	0	14	7	0	5	4	10	17	32	18	21	9
Family Maladjustment to Handicap	27	6	3	0	14	4	1	4	3	13	16	18	27	19	7
Society's Non-acceptance	40	7	5	0	22	7	1	7	5	21	25	21	19	40	16
Vocational Limitation	18	5	4	0	13	2	1	3	4	8	14	9	7	16	18

Appendix U

Clinic Estimates of Amounts of Certain Services Needed by Canvass Cases Seen at Clinics

Diagnosis	Number of Children Seen	Incomplete Attendance Adjustment Factor	Physical Medicine			Orthodontic Treatment	Eyeglasses	Speech Therapy Hrs. / Wk.	Social Work Service	Vocational Aid	Special Education	Home Nursing	Hospital Care--Short Term			Long Term Institutional Care
			Physical Therapy Hrs./Wk.	Physical Therapy Consultation	Orthopedic Prosthesis						Daytime		Medical	Surgical	Convalescent	
Cleft Palate	1	1.000						2		2	2					
Cosmetic	4	1.250							2	1				1		
Emotional Disturbance	5	1.833							3		1		1	1		1
Epilepsy	4	2.000						2	1				1			
Eye	22	1.333				2	6	1	5	5	4	4	1	8		1
Hearing	21	1.875	3	2	1	1	1	7	5		5		1	5		1
Heart	12	1.400				1	1		2	2			1	3		1
Mental Retardation	10	1.500		1		1	1	2	6		4	3	2	1		3
Orthodontic	11	1.545				10			6	1	1	7	1			
Orthopedic and C. P.	10	1.500	7	2	5				5	1	4	5	2	5	2	3
Speech	21	1.367		1	1		1	17	7	3	5			4		4
Total Cases	82		10	4	5	12	8	27	31	12	16	13	6	21	2	7

Appendix U

Estimated Amounts of Certain Services Needed per 1,000 Children in Community

Method of making adjustment of estimated amounts of community needs from amounts of service individually estimated on Canvass cases seen at clinics.

Considerations warranting adjustment	Factors used
1. Incomplete clinic attendance.	1. Separate attendance factor for each presumptive diagnostic group.
2. Conversion from duplicated to unduplicated count of children, when the same category of service appeared for any given child more than once.	2. Ratio of number of different children to number of times category of service called for -- in each category of service.
3. Identified cases that were missed by canvass.	3. Prorated (32/1252) portion of total estimates of each category of service need made on all volunteer cases seen at clinics.

Services Needed

Clinic Estimates of Amounts of Certain Services Needed By Volunteer Cases Seen at Clinics

Diagnosis	Number of Children Seen	Incomplete Attendance Adjustment Factor	Physical Medicine			Orthodontic Treatment	Eyeglasses	Speech Therapy Hrs. / Wk.	Social Work Service	Vocational Aid	Special Education		Home Nursing	Hospital Care -- Short Term			Long Term Institutional Care
			Physical Therapy Hrs./Wk.	Physical Therapy Consultation	Orthopedic Prosthesis						Daytime	Residential		Medical	Surgical	Convales-cent	
Cerebral Palsy	14	2.533	12	2	4			7	2	1	4			3			9
Cleft Palate	12	1.583				2		14	4	4	1		4		5	1	3
Cosmetic	21	1.348	3		2	1	1	2	6	2	5		4	2	15	4	
Emotional Disturbance	20	1.318					2	2		6	3			1			
Epilepsy	16	1.611					1		8	9	1		9	4			6
Eye	74	3.613		1	2	9	34	11	13	16	7		3	6	13	1	8
Hearing	32	5.000	3	1		2	2	13	12	5	7	3			12		3
Heart	36	1.370	2	2	3	4			7	5	2			7	5	2	1
Mental Retardation	58	3.079	11	4		3	3	19	21	9	26		5	2	6	1	16
Orthodontic	11	1.333		1		9	1	2	2	2	1		3	1			1
Orthopedic (not C.P.)	63	1.985	31	20	28	4	1	9	12	14	9	3	14	9	21	14	11
Speech	50	3.690	5	4	3	2	1	49	25	8	15	7	2	3	8	2	14
Total Cases	321		54	28	35	29	36	100	91	63	61	7	37	30	64	21	42

APPENDIX V

OUTLINE OF SERVICES FOR CEREBRAL PALSIED CHILDREN—

And Other Types of Neuromuscular Disability or Brain Injury
(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of possibility of condition and referral for diagnosis and care or component of case.)	Local	A. Private physicians General Practitioners, Pediatricians, and Orthopedists B. Hospital pediatric and orthopedic clinics C. Child Health Conference—(Health Department and others) Visiting nurses D. Schools E. Follow-up of newborn, infants and young children with adverse history (prematurity, Rh, anoxia, convulsions, traumatic brith, etc.) Welfare and social agencies F. Others—specify parents and relatives	
2. DIAGNOSIS (Specialized diagnosis, consultation and recommendation for care by multi-professional team)	State or District	Cerebral Palsy Diagnostic Center	Name and cities
3. REGISTRATION (Listing of patients and services needed and received)	State and Local	State Health Dept. Local Health Departments	
4. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private pyhsicians B. Child Health Conference—(Health Department and others) C. School Health Service D. Others—specify	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
5. SPECIALIZED MEDICAL SUPERVISION (Periodic examination and guidance in respect to cerebral palsy by qualified orthopedist or other appropriate specialist	District	A. Private orthopedists or other appropriate specialists	List names of cities
		B. Hospital, orthopedic, cerebral palsy or other specialty clinics	List names of hospitals and cities
		C. Itinerant clinics of State Health Department; Voluntary Agencies	List locations and frequency
		D. Others—specify	
6. THERAPIES (Direct patient care at frequency of at least once weekly—other than as hospital in-patient) (Exceptions* for indirect care—Patient usually expected to receive daily or almost daily exercises at home or in school, but may not receive most of treatments directly from therapist. Therapist may act as consultant to public health nurse, teacher or other professional person and/or to parent.)	Local		
PHYSICAL THERAPY		A. Private therapists	
		B. Hospital out-patient departments	
		C. Public schools, Private schools	
		D. Local services of health departments, voluntary agencies	
		E. *Indirect care	
		F. Others	
OCCUPATIONAL THERAPY		G. Private therapists	
		H. Hospital out-patient department	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		I. Public schools, Private schools	
		J. Local services of health departments; voluntary agencies	
		K. *Indirect care	
		L. Others	
SPEECH THERAPY		M. Private therapists	
		N. Hospital out-patient department	
		O. Public schools, Private schools	
		P. Local services of health departments, voluntary agencies	
		Q. *Indirect care	
		R. Others	
7. BRACES (Making, fitting and repairing braces to physician's prescription)	District	A. Hospital brace shops	
		B. Commercial brace makers	
		C. Others—specify	
8. SURGERY (Specialized surgical? service including qualified medical specialist and adequate hospital facilities)	District	Hospitals	List names and cities
9. DENTAL CARE (Made available to cerebral palsied children)	Local or District	A. Private dentists	If Regional, list cities where located
		B. Dental clinics	Names and cities
		C. Health Departments	Names and cities
		D. Schools	Mames and cities
10. DAYTIME EDUCATION REGULAR (Attending regular classes with or without modified program in regular class)	Local	A. Public schools	
		B. Parochial and private schools	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)		C. Public schools D. Parochial and private schools E. Voluntary agencies	
HOME INSTRUCTION (Teacher visits home)		F. Public schools G. Parochial and private schools	
HOSPITAL INSTRUCTION	District or Local	H. Public schools	
1. RESIDENCE EDUCATION AND CARE (Special cerebral palsy residence, school or residence, school for handicapped children—24 hour care for limited duration for education and therapy that will make daytime education possible)	State	A. Voluntary agencies	Names and cities
		B. State Department of Education	Location
		C. Others	Names and locations
2. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies B. Voluntary family and other social agencies C. Child Guidance clinics D. Cerebral palsy services E. Hospitals F. Schools G. Others	
3. RECREATION (Organized recreational programs or facilities)	Local	A. Day care centers, parks department, day camps, nursery schools, playgrounds, extended school programs, etc. B. Y.M.C.A. groups, settlement houses, etc. C. Social groups for adolescents	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		D. Schools	
	District	E. Summer camps	
		F. Others—specify categories	
4. VOCATIONAL GUIDANCE (Vocational assistance in respect to the disbility, by counseling, training, and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State partment of Education	Give cities of location of District Offices
		B. Voluntary agencies	Name and cities of office location
		B. Public schools	
		D. Y.M.C.A., settlement houses, etc.	
		E. Others—specify categories	
5. EMPLOYMENT (Organized programs of employing cerebral palsied adults)	Local and District	A. Sheltered workshops	Names and locations
		B. Homebound work	
		C. Non-sheltered work; Chambers of Commerce, employer's associations, labor unions	
		D. Federation of Handicapped, etc.	
		E. Official and private employment agencies	
6. FOSTER CARE	District	A. Children's institutions (for dependent and neglected children)	Names and locations
	Local	B. Foster homes	
7. LONG TERM INSTITUTIONAL CARE For severely mentally deficient	State or District	A. State institution for mentally deficient children	Name
		B. Others—specify	Names and locations
For severe physical disability	State or District	A. State institution	Name
		B. Others—specify	Names and locations

APPENDIX V

OUTLINE OF SERVICES FOR CHILDREN WITH CLEFT PALATE

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First recognition of presence of condition, and referral for diagnosis and care or component of case)	Local	A. Private physicians (General practitioners, pediatricians, obstetricians, surgeons, otologists and rhinologists)	
		B. Private dentists (General practitioners, orthodontists, pedodontists)	
		B. Hospital pediatric clinics	
		D. Hospital dental clinics	
		E. Hospital maternity services	
		F. Midwives	
		H. Health Departments	
		H. Visiting nurse agencies	
		I. Speech correction agencies and services	
		J. Others—specify	
2. DIAGNOSIS AND RECOMMENDATION FOR CARE (Specialized diagnosis, consultation and recommendation for care necessarily by multiprofessional team, and including periodic reappraisal)	State or District	A. State Health Department	Cities
		B. Hospital or medical center	Names and cities
		C. Dental school	Names
		D. University Department of speech or psychology	Names
		E. Voluntary agency	Names and cities
		F. Others—specify	
3. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private physicians	
		B. Health Department well child clinics	
		C. School Health Service	
		D. Hospital outpatient clinics	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		E. Others—list categories here	
4. PLASTIC SURGERY (By qualified specialist in hospital with adequate facilities)	General	A. Private plastic surgeon, oral surgeon, or other appropriately trained specialist	Cities
		B. Hospital or medical center	Names and cities
5. FURNISHING OF ORAL PROSTHESIS (By qualified prosthetist under recommendation of multi-professional team)	District or State	A. Private dental specialists	Cities
		B. Dental clinics	Names and cities
		C. Health Department	Cities
		D. Others—specify	Names and Cities
6. GENERAL DENTAL CARE (Including oral hygiene, fillings, root canal work, extractions, etc.)	Local	A. Private dentists	
		B. Dental clinics	
		C. School Health Service	
		D. Health Department	
		E. Others—specify	
7. ORTHODONTIC CARE (By qualified specialist)	District	A. Private orthodontists	List cities of location
		B. Oethodontic clinics	Names and cities
		C. School Health Service	Names and cities
		D. Others—specify	Names and cities
8. DAYTIME EDUCATION REGULAR (Attending regular classes with or without modified program in regular class)	Local	A. Public schools	
		B. Parochial and private schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)		C. Public schools	
		D. Parochial and private schools	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
9. SPEECH TRAINING (Direct patient care at frequency of at least once weekly—other than as hospital in-patient) (Exceptions* for indirect care—Patient usually expected to receive daily or almost daily exercises at home or in school, but may not receive most of treatments directly from therapist. Therapist may act as consultant to public health nurse, teacher or other professional person and/or parent)	Local	A. Private therapists	
		B. Hospital out-patient department	
		C. Public schools	
		D. Local services of health departments	
		E. *Indirect care	
		F. Others	
10. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Voluntary family and other special agencies	
		C. Child guidance clinics	
		D. Health departments	
		E. Others—specify	
11. RECREATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery school, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
		C. Social groups for adolescents	
	District	D. Summer camps	
		E. Others—specify categories	
12. HEARING TESTING	Local or District	A. Schools	Cities
		B. Hospital otology clinics	Names and cities
		C. Private otologists	Cities
		D. Health Department	Cities

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		E. University speech department	Names and cities
		F. Voluntary agencies	Names and cities
		G. Others—specify	
13. MEDICAL TREATMENT OF EAR AND NOSE	Local or District	A. Private otorhinologists	Cities
		B. Hospital otorhinology clinics	Names and cities
		C. Others—specify	
14. CARE AND CORRECTION OF HEARING IMPAIRMENT (Including training in hearing discrimination, fitting, furnishing and training for hearing aid)	Local or District	A. Schools	Cities
		B. Voluntary agencies	Names and cities
		C. University speech and hearing service	Names and cities
		D. Health Department	Cities
		E. Others—specify	Names and cities
15. VOCATIONAL GUIDANCE (Vocational assistance in respect to the disability, by counseling, training, and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities of location of District Offices
		B. Voluntary agencies	Names and cities of office location
		C. Others—specify	Names and cities

APPENDIX V

OUTLINE OF SERVICES FOR EMOTIONALLY DISTURBED CHILDREN

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. EDUCATION FOR ALL PARENTS IN CHILD REARING—IN REFERENCE TO SPECIFIC CHILDREN (No problems or mild behavior problems)	Local	A. Private physicians—General Practitioners, Pediatricians	
		B. Child Health Conference—(Health Department and others)	
		C. Nursery schools	
		D. Churches	
		E. Schools	
		F. Others—specify	
2. OUT-PATIENT DIAGNOSIS (Psychologic, social and psychiatric appraisal)	Local	A. Schools	
		B. Child guidance or mental health clinics	
		C. Official welfare agencies	
		D. Voluntary child, family and other social agencies	
		E. Juvenile courts	
		F. Others—specify	
3. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, parent counseling, psychiatric or related service to child and/or family in respect to definite behavior problems)	Local	A. Schools	
		B. Child guidance or mental health clinics	
		C. Official welfare agencies	
		D. Voluntary child, family and other social agencies	
		E. Juvenile courts	
		F. Others—specify	
4. DAYTIME EDUCATION SPECIAL (Attending school in special unit with other emotionally disturbed children on full time basis)	Local	A. Public schools	
		B. Parochial and private schools	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
5. RECREATION AND EARLY EDUCATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery schools, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
		C. Social groups for adolescents	
	District	D. Summer camps	
		E. Others—specify categories	
6. FOSTER CARE	District	A. Children's institutions (for dependendent and neglected children)	Names and locations
	Local	B. Foster homes	
7. STUDY HOMES (Short term stay for study preliminary to placement and plan of care)	District	A. Official welfare agencies	Names and cities
		B. Voluntary Child, family, and other social agencies	Names and cities
		C. Others—specify	Names and cities
8. RESIDENCE EDUCATION (Including corrective institutional care for minors)	District	A. State agency	Names and cities
		B. Voluntary social agencies	Names and cities
		C. Others—specify	Names and cities
9. DETENTION HOMES (Short term stay preliminary to placement, but without study program)	District	A. Juvenile courts	Names and cities
		B. Official welfare agencies	Names and cities
		C. Voluntary family, child and other social agencies	Names and cities
		D. Others—specify	Names and cities

APPENDIX V

OUTLINE OF SERVICES FOR CHILDREN WITH EPILEPSY

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of possibility of condition and referral for diagnosis and care or component of care)	Local	A. Private physicians —G.P. and Ped. 1. Health supervision 2. Care of illness	
		B. Hospital pediatric clinics	
		C. Health Department —Child Health Conference	
		D. School Health Service	
		E. Others—specify	
2. DIAGNOSIS (Specialized diagnosis, consultation and recommendation for further care, preferably by multi-professional team)	District	A. Private medical specialists	List of cities of location
		B. Epilepsy or seizure clinics	Name and city
		C. Consultation through School Health Service	
		D. Others—specify	
3. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private physicians	
		B. Health Department well child clinics	
		C. School Health Service	
		D. Hospital out-patient clinics	
		E. Others—list categories here	
4. SPECIALIZED MEDICAL SUPERVISION (Periodic examination and guidance, preferably by multi-professional team)	District	A. Private specialists	Assumed to be same as 2.A.—if not, list
		B. Epilepsy or seizure clinics	Assumed to be same as 2.B.—if not, list
		C. Consultation through School Health Service	
		D. Others—specify	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
5. SURGERY (Specialized neurosurgery by qualified specialists with adequate hospital facilities)	State	Hospitals	Name of institution and city
6. DAYTIME EDUCATION REGULAR CLASSES	Local	A. Public schools	
		B. Parochial and private schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)		C. Public schools	
		D. Parochial and private schools	
		E. Public schools	
HOME INSTRUCTION (Teacher visits home)		E. Public schools	
		F. Parochial and private schools	
		and private schools	
7. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Voluntary family and other social agencies	
		C. Child Guidance clinics	
		D. Epilepsy or seizure clinics	Name and city
		E. Public schools	
		F. Others	
8. RECREATION AND EARLY EDUCATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery schools, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
	District	D. Summer camps	
		E. Others—specify categories	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
9. VOCATIONAL GUIDANCE AND REHABILITATION (Vocational assistance in respect to the disability, by counseling, training and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities of location of District offices
		B. Voluntary agencies	Names and cities of office location
		C. Others—specify categories	
10. EMPLOYMENT (Organized programs of employing handicapped young adults)	Local or District	A. Sheltered workshops	Names and locations
		B. Non-sheltered work; Chambers of Commerce, employer's associations, labor unions	

APPENDIX V

OUTLINE OF SERVICES FOR DEAF AND HARD OF HEARING CHILDREN

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of possibility of condition and referral for diagnosis and care or component of care)	Local	A. Private physicians—General Practitioners, Pediatricians and Otologists	
		B. Hospital pediatric and otologic clinics	
		C. Child Health Conference—(Health Department and others)	
		D. School Health Service	
		F. Follow-up of infants and young children with familial history of hearing impairment	
		F. Others--specify	
2. DIAGNOSIS (Specialized diagnosis consultation and recommendation for care, preferably by multi-professional team. Minimum of otologist and audiometry)	District	A. Private otologists	List cities
		B. Otology clinics of hospitals	Names and cities
		C. Voluntary agencies	Names and cities
		D. Health Department	List cities
		E. Schools	List cities
		F. Others—specify	Names and cities
3. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private physicians	
		B. Child Health Conference—(Health Department and others)	
		C. School Health Service	
		D. Others—specify	
4. SPECIALIZED MEDICAL SUPERVISION (Periodic examination and guidance by qualified otologist)	District	A. Private otologists	List cities
		B. Hospital otology clinics	Names and cities
		C. Itinerant clinics of State Health Department	List cities

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		D. Voluntary agencies	Names and cities
		E. Others—specify	Names and cities
5. THERAPIES (Direct patient care at frequency of at least once weekly—other than as hospital in-patient) (Exceptions* for indirect care—Patient usually expected to receive daily or almost daily exercises at home or in school, but may not receive most of treatments directly from therapist. Therapist may act as consultant to public health nurse, teacher or other professional person and/or to parent)			
SPEECH (LIP) READING	Local	A. Schools	
		B. Health Department	
		C. Voluntary agencies	
		D. *Indirect care	
		E. Others	
SPEECH TRAINING	Local	A. Schools	
		B. Health Departments	
		C. Voluntary agencies	
		D. *Indirect care	
		E. Others	
HEARING DISCRIMINATION	Local	A. Schools	
		B. Health Departments	
		C. Voluntary agencies	
		D. *Indirect care	
		E. Others	
HEARING AIDS (Fitting and training)	Local	A. Schools	
		B. Health Departments	
		C. Voluntary agencies	

APPENDIX V

Definition of Components of Rehabilitation	**Geographic Classification**	**Categories of Agencies and Workers**	**Names of Agencies and Locations**
		D. *Indirect care	
		E. Others	
6. DAYTIME EDUCATION	Local	A. Public schools	
REGULAR (Attending regular classes with or without modified program in regular class)		B. Parochial and private schools	
		C. Public schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)		D. Parochial and private schools	
7. RESIDENCE EDUCATION	State or District	A. State Department of Education	Name and cities
		B. Others	Name and cities
8. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Voluntary family and other social agencies	
		C. Child guidance clinics	
		D. Voluntary agencies for hard of hearing	
		E. Others—specify	
9. VOCATIONAL GUIDANCE (Vocational assistance in respect to the disability by counseling, training, and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities of location of District Offices
		B. Voluntary agencies	Names and cities of office location
		C. Others—specify categories	
10. EMPLOYMENT (Organized programs of employing deaf and hard of hearing young adults)	Local or District	A. Sheltered workshops	Names and locations
		B. Non-sheltered work; Chambers of Commerce, employers' associations, labor unions	

APPENDIX V

OUTLINE OF SERVICES FOR CHILDREN WITH RHEUMATIC FEVER, RHEUMATIC HEART DISEASE OR CONGENITAL HEART DISEASE

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of possibility of condition and referral for diagnosis and care or component of care)	Local	A. Private physicians —G.P. and Ped. 1. Health supervision 2. Care of illness	
		B. Hospital pediatric clinics	
		C. Health Department —Child Health Conference	
		D. School Health Service	
		E. Others—specify	
2. DIAGNOSIS (Specialized diagnosis, consultation and recommendation for further care)	District	A. Private medical specialists	List of cities of location
		B. Hospital cardiac clinics	List by name of hospital and city
		C. Other cardiac clinics	List by name of hospital and city
		D. Consultation through School Health Service	
		E. Special diagnostic team for congenital heart disease	Name of institution and city
		F. Others—specify	
3. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private physicians	
		B. Health Department well child clinics	
		C. School Health Service	
		D. Hospital outpatient clinics	
		E. Others—list categories here	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
4. SPECIALIZED MEDICAL SUPERVISION (Periodic examination and guidance by qualified cardiologist)	District	A. Private specialists	Assumed to be same as 2.A.—if not, list
		B. Hospital cardiac clinics	Assumed to be same as 2.B—if not, list
		C. Other cardiac clinics	Assumed to be same as 2.C.—if not, list
		D. Home medical care programs	Name agency and cities covered
		E. Others—specify	
5. HOSPITAL MEDICAL CARE	Local	Hospitals	
6. SURGERY (Specialized pre-operative diagnosis and surgical service, including team of qualified specialists and appropriate hospital facilities)	District	Hospitals	List by name of institution and city
7. CONVALESCENT INSTITUTION CARE (Temporary stay after attacks of rheumatic fever or other acute cardiac episode)	District	Hospitals and convalescent institutions	List names and cities
8. HOME NURSING SERVICE	Local	A. Health Departments	
		B. Voluntary agency visiting nurse services	
9. DAYTIME EDUCATION REGULAR CLASSES	Local	A. Public schools	
		B. Parochial and private schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time		C. Public schools	
		D. Parochial and private schools	
HOME INSTRUCTION (Teacher visits home)		E. Public schools	
		F. Parochial and private schools	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
10. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Voluntary family and other social agencies	
		C. Child guidance clinics	
		D. Public schools	
		E. Hospitals	
		F. Others	
11. RECREATION AND EARLY EDUCATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery schools, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
	District	D. Summer camps	
		Others—specify categories	
12. VOCATIONAL GUIDANCE AND REHABILITATION (Vocational assistance in respect to the disability, by counseling, training and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities of location of District Offices
		B. Voluntary agencies	Names and cities of office location
		C. Others—specify categories	
13. EMPLOYMENT (Organized programs of employing handicapped young adults)	Local or District	A. Sheltered workshops	Names and locations
		B. Non-sheltered work; Chambers of Commerce, employers' associations, labor unions	

APPENDIX V

OUTLINE OF SERVICES FOR MENTALLY RETARDED AND MENTALLY DEFICIENT CHILDREN

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of possibility of condition and referral for diagnosis and care or component or care)	Local	A. Private physicians—General Practitioners, Pediatricians	
		B. Hospital pediatric clinics	
		C. Child Health Conference—(Health Department and others)	
		D. Schools	
		E. Social agencies	
		F. Others—specify	
2. PSYCHOMETRIC AND PSYCHOLOGIC APPRAISAL	Local or District	A. Schools	
		B. Child Guidance clinics	
		C. Private psychologists	
		D. Social agencies	
		E. Others—specify	
3. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Voluntary family and other social agencies	
		C. Child Guidance clinics	
		D. Others	
4. DAYTIME EDUCATION SPECIAL (Attending school in special unit with other mentally retarded children on full time basis)	Local	A. Public schools	
		B. Parochial and private schools	
5. DENTAL CARE (Made available to mentally retarded children)	Local or District	A. Private dentists	If Regional, list cities where located
		B. Dental clinics	Names and cities
		C. Health Departments	Names and cities
		D. Schools	Names and cities

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
6. RECREATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery schools, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
		C. Social groups for adolescents	
	District	D. Summer camps	
		E. Others—specify categories	
7. SHELTERED EMPLOYMENT	Local or District	Sheltered workshops	Names and locations
8. LONG TERM INSTITUTIONAL CARE	State or District	State Department of Education	Location
		Others—specify	Names and locations

APPENDIX V

OUTLINE OF SERVICES FOR ORTHODONTICALLY HANDICAPPED CHILDREN

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of presence of condition and referral for diagnosis and care of component of care)	Local Local	A. Private physicians (General practitioners, pediatricians, rhinologists)	
		B. Dentists (General practitioners and pedodontists)	
		C. Schools	
		D. Hospital pediatric clinics	
		E. Child Health Conference (Health Departments and others)	
		F. Others—specify	
2. DIAGNOSIS (Specialized diagnosis, consultation and recommendation for further use)	District	A. Private orthodontists	List cities of location
		B. Orthodontic clinics	Names and cities
		C. School Health Service	Names and cities
		D. Others—specify	Names and cities
3. GENERAL DENTAL CARE (Including oral hyhiene, fillings, root canal work, extractions, etc.)	Local	A. Private orthodontists	
		B. Orthodontic clinics	
		C. School Health Service	
		D. Private dentists	
		E. Dental clinics	
		F. Others—specify	
4. ORTHODONTIC CARE (By qualified specialist)	District	A. Private orthodontists	List cities of location
		B. Orthodontic clinics	Names and cities
		C. School Health service	Names and cities
		D. Others—specify	Names and cities

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
5. DAYTIME EDUCATION REGULAR CLASSES Speech Therapy	Local	A. Public schools B. Parochial private schools	
6. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies B. Voluntary family and other social agencies C. Child guidance clinics D. Public schools E. Hospitals F. Health Departments G. Others—specify	

APPENDIX V

OUTLINE OF SERVICES FOR THE ORTHOPEDICALLY HANDICAPPED

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First recognition of presence of condition and referral for diagnosis and care or component of care)	Local	A. Private physicians	
		B. Hospital pediatric clinics	
		C. School Health Service	
		D. Health Department —Child Health Conference	
		E. Others	
2. DIAGNOSIS AND RECOMMENDATION FOR CARE (Specialized diagnosis, consultation and recommendation for further care, preferably by multi-professional team)	District	A. Itinerant clinics of State Health Department	List locations and frequency
		B. Orthopedic out-patient clinics of hospitals (also, in-patient diagnostic services if needed	List by name of hospital and city
		C. Private orthopedists	List cities where located
		D. Voluntary agencies' clinics	List names of agencies, cities where clinics are held, and frequency of each child
		E. Others—list categories here	List locations. If clinics, give frequency
3. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private physicians	
		B. Health Department well child clinics	
		C. School Health Service	
		D. Hospital out-patient clinics	
		E. Others—list categories here	

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
4. SPECIALIZED MEDICAL SUPERVISION (Periodic examination and guidance by qualified orthopedist or other appropriate spesialist in respect to orthopedic status)	District	A. Private orthopedists or other appropriate specialists	List assumed to be same as 2.C.—If not, indicate here
		B. Hospital orthopedic clinics	List assumed to be same as 2.B.—If not, indicate here
		C. Itinerant clinics of State Health Department	List assumed to be same as 2.A.—If not, indicate here
		D. Others	
5. THERAPIES (Direct patient care at frequency of at least once weekly—other than as hospital inpatient) (Exceptions* for indirect care—Patient usually expected to receive daily or almost daily exercises at home or in school, but may not receive most of treatments directly from therapist. Therapist may act as consultant to public health nurse, teacher or other professional person and/or to parent)	Local		
PHYSICAL THERAPY		A. Private therapists	
		B. Hospital outpatient department	
		C. Public schools	
		D. Local services of health departments	
		E. *Indirect care	
		F. Others	
OCCUPATIONAL THERAPY		G. Private therapist	
		H. Hospital outpatient department	
		I. Public schools	
		J. Local services of health departments	
		K. *Indirect care	
		L. Others	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
SPEECH THERAPY		M. Private therapists N. Hospital out-patient department O. Public schools P. Local services of health departments Q. *Indirect care R. Others	
6. BRACES (Making, fitting and repairing braces to physicians' prescription)	District	A. Hospital brace shops B. Commercial brace makers C. Others—specify	
7. SURGERY (Specialized surgical service including qualified medical specialist and adequate hospital facilities)	District	Hospitals	List assumed to be same as 2.B.—If not, indicate here
8. CONVALESCENT INSTITUTION CARE (Temporary stay other than for acute illness or surgery—primary objective health care)	District	Hospitals and Convalescent Institutions	List names and cities
9. DAYTIME EDUCATION REGULAR (Attending regular classes with or without modified program in regular class)	Local	A. Public schools B. Parochial and private schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)		C. Public schools D. Parochial and private schools	
HOME INSTRUCTION (Teacher visits home)		E. Public schools F. Parochial and private schools	
10. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies B. Voluntary family and other social agencies C. Child Guidance clinics D. Others—specify	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
10. RECREATION AND EARLY EDUCATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery schools, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
		C. Social groups for adolescents	
	District	D. Summer camps	
		E. Others—specify categories	
12. VOCATIONAL GUIDANCE (Vocational assistance in respect to the disability, by counseling, training, and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities of location of District Offices
		B. Voluntary agencies	Name and cities of office location
		C. Others—specify categories	
13. EMPLOYMENT (Organized programs of employing orthopedically handicapped young adults)	Local or District	A. Sheltered workshops	Names and locations
		B. Non-sheltered work; Chambers of Commerce, employers' associations, labor unions	
14. FOSTER CARE	District	A. Children's institutions (for dependent and neglected children)	Names and locations
	Local	B. Foster homes	
15. LONG TERM INSTITUTIONAL CARE (Occasionally a child has normal mentality and has a severe physical disability which cannot be corrected or ameliorated. He may require institutional care for years or life, particularly at adolescence when he becomes too large to be carried or managed by his family)	State	Name and location of institution, if any	

APPENDIX V

OUTLINE OF SERVICES FOR CHILDREN WITH SPEECH IMPAIRMENT

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First recognition of presence of condition, and referral for diagnosis and care or component of care.)	Local	A. Schools	
		B. Private physicians	
		C. Hospital pediatric and otology clinics	
		D. Child Health Conference (Health Department and others.)	
		E. Child guidance clinics	
		F. University Departments of speech, psychology, etc.	
		G. Voluntary agencies	
		H. Others—specify	
2. DIAGNOSIS AND RECOMMENDATION FOR CARE (Specialized diagnosis, consultation and recommendation for care necessarily by multi-professional team, and including periodic re-appraisal	State or District	A. University Department of speech	Names and cities
		B. Voluntary agency	Names and cities
		C. Health Department	Cities
		D. Hospital or Medical Center	Names and cities
		E. Others—specify	
3. MEDICAL TREATMENT OF EAR AND NOSE	Local or District	A. Private otorhinologists	Cities
		B. Hospital otorhinology clinics	Names and cities
		C. Others—specify	
4. SPEECH TRAINING (Direct patient care at frequency of at least once weekly—other than as hospital inpatient) (Exceptions* for indirect care—Patient usually expected to receive daily or almost daily exercises at home or in school, but may not receive most of treatment directly from therapist. Therapist may act as consultant to public health nurse, teacher or other professional person and/or to parent)	Local	A. Private therapists	
		B. Hospital outpatient department	
		C. Public schools	
		D. Local services of health departments	
		E. *Indirect care	
		F. Others	

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
5. CARE AND CORRECTION OF HEARING IMPAIRMENT (Including training in hearing discrimination, fitting, furnishing and training for hearing aid)	Local or District	A. Schools	Cities
		B. Voluntary agencies	Names and cities
		C. University speech and hearing service	Names and cities
		D. Health Department	Cities
		E. Others—specify	Names and cities
6. DAYTIME EDUCATION REGULAR (Attending regular classes with or without modified program in regular class)	Local	A. Public schools	
		B. Parochial and private schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)		C. Public schools	
		D. Parochial and private schools	
7. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Voluntary family and other social agencies	
		C. Child guidance clinics	
		D. Health Department	
		E. Others—specify	
8. RECREATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, nursery schools, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses, etc.	
		C. Social groups for adolescents	
	District	D. Summer camps	
		E. Others—specify categories	
9. VOCATIONAL GUIDANCE (Vocational assistance in respect to the disability, by counseling, training, and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities or location of District Offices
		B. Voluntary agencies	Names and cities of office location
		C. Others—specify categories	Names and cities

APPENDIX V

OUTLINE OF SERVICES FOR CHILDREN WHO ARE BLIND, VISUALLY HANDICAPPED, OR HAVE OTHER EYE DISABILITIES

(Indicate service regardless of source of payment for service)

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
1. CASE FINDING (First suspicion of presence of condition, and referral for diagnosis and care or component of care	Local	A. Private physicians (General Practitioners, Pediatricians, Obstetricians, Ophthalmologists)	
		B. Hospital and other clinics (Pediatric, eye)	
		C. Child Health Conference—(Health Department and others)	
		D. Schools	
		E. Hospital maternity services	
		F. Hospital services for premature infants	
		G. Midwives	
		H. Optometrists	
		I. Others—specify	
2. DIAGNOSIS AND RECOMMENDATION FOR CARE (Specialized diagnosis consultation and recommendation for care)	District	A. Private ophthalmologists	
		B. Hospital eye clinics	Names and cities
		C. Health Department clinics	Names and cities
		D. Voluntary agencies	Names and cities
		E. Others—specify	Names and cities
3. GENERAL HEALTH SUPERVISION (General medical examination and guidance when well and during acute illness)	Local	A. Private physicians	
		B. Child Health Conference—(Health Department and others)	
		C. School Health Service	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		D. Hospital clinics	
		E. Others—specify	
4. PREPARING AND AND FITTING EYEGLASSES	Local or District	A. Private practitioners and commercial establishments	
		B. Hospital eye clinics	
		C. Voluntary agencies	
		D. Welfare departments	
		E. Others—specify	
5. PREPARING AND FITTING EYE PROSTHESES, SUCH AS FALSE EYES	District	A. Commercial establishments	Names and cities
		B. Hospital eye clinics	Names and cities
		C. Voluntary agencies	Names and cities
		D. Others—specify	Names and cities
6. SPECIALIZED MEDICAL SUPERVISION (Periodic examination and guidance by qualified ophthalmologist)	District	A. Private ophthalmologists	Names and cities
		B. Hospital eye clinics	Names and cities
		C. Health Department clinics	Names and cities
		D. Voluntary agencies	Names and cities
		E. Others—specify	Names and cities
7. SURGERY (e.g. for strabismus, ptosis, cataract, etc. Specialized surgical service including qualified medical specialist and adequate hospital facilities)	District	Hospitals	Names and cities

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
8. ORTHOPTIC TRAINING (By qualified technician under supervision of qualified ophthalmologist and with adequate equipment and facilities)	Local	A. Private ophthalmologist's office	Cities
		B. Private orthoptic technicians	Cities
		C. Hospital eye clinics	Names and cities
		D. Health Department clinics	Names and cities
		E. Voluntary agencies	Names and cities
(Indirect therapy—Less frequent visits to technician who may act as consultant to Public Health Nurse, teacher, or other professional person and/or parent)	District	A. Private ophthalmologist's office	Cities
		B. Private orthoptic technicians	Cities
		C. Hospital eye clinics	
		D. Health Department clinics	Names and cities
		E. Voluntary agencies	Names and cities
9. DAYTIME EDUCATION REGULAR(Attending regular classes with or without modified program in regular class)	Local	A. Public schools	
		B. Parochial and private schools	
SPECIAL (Attending school in special unit with other handicapped children on full time basis or receiving special services at school on part time basis)			
a. Sight conservation		C. Public schools	
		D. Parochial and private schools	
b. Blind		E. Public schools	
		F. Parochial and private schools	
c. Nursery school		G. Public schools	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
		H. Parochial and private schools	
HOME INSTRUCTION (Teacher visits at home)		I. Public schools	
		J. Parochial and private schools	
10. RESIDENCE EDUCATION FOR BLIND	State or District	A. State Department of Education	Names and cities
		B. Voluntary agencies	Names and cities
		C. Others—specify	Names and cities
11. SOCIAL WORK AND MENTAL HEALTH GUIDANCE (Social case work, psychiatric or related service to patient and/or family in respect to the disability)	Local	A. Official welfare agencies	
		B. Health Department	
		C. Voluntary social agencies	
		D. Voluntary agencies for blind	
		E. Child guidance clinics	
		F. Schools	
		G. Others	
12. RECREATION (Organized recreational programs or facilities)	Local	A. Day care centers, day camps, playgrounds, etc.	
		B. Y.M.C.A. groups, settlement houses etc.	
		C. Social groups for adolescents	
	District	D. Summer camps	Name and location
		E. Others—specify	

APPENDIX V

Definition of Components of Rehabilitation	Geographic Classification	Categories of Agencies and Workers	Names of Agencies and Locations
13. VOCATIONAL GUIDANCE (Vocational assistance in respect to the disability, by counseling, training, and/or placement—not including physical restoration or financial aid)	District	A. Division of Vocational Rehabilitation of State Department of Education	Give cities of location of District Offices
		B. Voluntary agencies	Names and cities of office location
		C. Others—specify categories	
14. EMPLOYMENT (Organized programs of employing visually handicapped young adults)	Local	A. Sheltered workshops	Names and locations
		B. Non-sheltered work; Chambers of of Commerce, employer's associations, labor unions	
15. FURNISHING AND TRAINING"SEEING-EYE" DOGS	Out-of-State		

APPENDIX W

Composite Community Blue Print and Instructions

GEORGIA STUDY OF SERVICES FOR HANDICAPPED CHILDREN

Instructions for Use of Community Blueprint

What is this blueprint?

You are going to look at your own community to find out what you are doing for handicapped children and to see what gaps may exist. The Community Blueprint is a guide. It attempts to list all the possible services that might be available in the perfect or complete community program for handicapped children.

Column I lists all the different services needed for handicapped children.

Column II tells what kinds of individuals, organizations or agencies might give each one of these services.

Column III tells which ones of the different types of handicaps might be given service by each of the different individuals, organizations or agencies.

Column IV tells whether the service should be in your own community or might be reasonably available, even though it is at some distance.

Column V is concerned with the amounts of each type of service that are available.

Becoming familiar with the material.

1. Study the items in Column I. These are the services that handicapped children might need in any community. Do *not* as yet try to list or identify these services in your community.
2. Study Columns II and III together. Column II lists the individuals and agencies who could give the corresponding services. Column III shows to which handicapping conditions each of the resources in Column II might apply. Do *not* as yet try to list or identify these resources in your community.
3. Study Column IV together with Column II. Certain Services, such as education, may be needed almost every day and therefore must be near the child's home. Other services such as a specialist's consultation may be needed very infrequently and could therefore be obtained from a distance.

   Column IV tells whether the corresponding services listed in Column I and furnished by individuals or agencies listed in Column II should be near the patient's home (local) or might be at a distance (district) and still be considered a reasonable part of the community program for handicapped children.

   An item marked "local" must be in the community to be considered available. An item marked "district" might happen to be in the community (e.g., in a large city) but should be at least in the same part of the state and reasonably accessible.

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DO NOT TRY TO FURNISH INFORMATION REQUESTED BELOW UNTIL YOUR COMMITTEE HAS THOROUGHLY DISCUSSED AND FULLY UNDERSTANDS THE BLUEPRINT.

Looking at your community.

4. Now, for *each* of the items in Column I

   a. *Underline* the resources listed in Column II (Possible) that are actually available. Disregard for the time being whether or not you consider the resource adequate or complete. If it is present at all for this particular service, underline it. Insert in Column II (Actual) or attach names and locations of each individual or agency. When in doubt whether or not a person is a specialist, list the name with a question mark. Further clarification can be obtained later. Add any other resources not included in the list.

   b. Also *underline* or write in Column III the handicapping conditions which receive care from that resource. Again, disregard the question of adequacy or completeness of that service. Add any diagnoses on the code sheet that receive service but are not listed in Column III.

   c. In Column IV, write L (local) if the resource is in your community; D (district) if not, but reasonably available to you.

   d. In Column V, indicate amount of service by the appropriate unit of measurement, for example:

      1 2 3 4 5 or

      1 2 3 4 5 with explanation, or

      Q — # hours per week and months per year — 20 hrs/wk for 10 mos/yr

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Examples:

P. 6, Item 5—"Special Health Care, A. Medical"—You have in your community an orthopedist who treats orthopedic conditions but not cerebral palsy and he does not treat patients unable to pay his private fees.

Column II—Underline "orthopedist" and write his name

Column III—Underline "orthop" but not "CP"

Column IV—Write "L"

Column V—Circle 1 2 3 4 5 and explain

P. 9, Item 5—"Speech Training" In one of your public schools, there is a speech therapist who gives speech therapy to pupils as frequently as necessary and regardless of diagnosis.

Column II—Underline "School—Public" and give name of school

Column III—Underline all diagnoses

Column IV—Write "L"

Column V—Give number of hours a week and months a year she works—e.g., 30 hours—10 months

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P. 10, Item 6—"Speech Training" You do not have a speech therapist in your community, but on the staff of the State Department of Education there is a speech therapist who visits schools and homes in your community and advises the local teachers, nurses and parents on speech correction for children with cerebral palsy.

Column II—Underline "School—Public" and write "State Department of Education" and give name of city in which therapist's office or home base is located.

Column III—Underline "CP" only

Column IV—Write "D"

Column V—Estimate number of hours per week and months per year in which she works in your community—
e.g., 4 hours—11 months

P. 13, Item 7 B—"Daytime Education—special units"—In a public school in the neighboring county, there is a special day class for cerebral palsied and orthopedically handicapped children. Your school board is able to make financial arrangements which permit children in your community to attend that class if the family can furnish transportation. One family is able to do this for their child, but the other families cannot.

All Columns—Leave blank. This is not a local service nor can it reasonably be considered available on a district basis.

P. 13 Item 7 B—"Daytime Education—special units"—In a public school in the neighboring county, there is a special day class for cerebral palsied and orthopedically handicapped children. Your school board sends children in your community to that class and furnishes transportation for them.

Column II—Underline "Schools—Public" and give name and location of school.

Column III—Underline "CP and Orthop"

Column IV—Write "D"

Column V—Give maximum number of children from your community that will be accepted for the special class in the other county. (Might also indicate number now attending.)

P. 15, Item D 1. "Medical Social Work"—In a hospital in town X in your county, the social worker gives service to families quite fully in that town, makes visits as well to town Y, but does not get to town Z.

Column II—Underline "hospitals" and give name and location

Column III—Underline "all diagnoses"

Column IV—Write "L" for town X, "D" for town Y

Column V—Active number of patients carried by worker.

APPENDIX W

GEORGIA STUDY OF SERVICES FOR HANDICAPPED CHILDREN

COMMUNITY BLUEPRINT — CODE SHEET

Key to Different Handicapping Conditions included in Column III	Key to Amounts of Available Services indicated in Column V
Cl Pal -Cleft palate or lip Cos -Cosmetic defect C P -Cerebral Palsy Emot -Emotional disturbance Epil -Epilepsy Eye -Vision or other eye disturbances Hear -Hearing impairment Heart -Heart disease or rheumatic fever Ment -Mental retardation Orthod -Dento-facial (orthodontic) handicap Orthop -Orthopedic handicap Sp -Speech defect	If absent, leave blank
	P—If present, circle appropriate numbers P-1—Present, but not available to all possible diagnosis listed in Column III. Explain. P-2—Present, but not available in all parts of community. Explain. P-3—Present, but not available to all economic or racial groups. Explain. P-4—Present, but not utilized to fullest potential. Explain. P-5—Present, readily available to all groups for all diagnosis in all parts of the community and fully utilized.
	Q—Give estimated quantity of service expressed in units as indicated.

APPENDIX W

GEORGIA STUDY OF SERVICES FOR HANDICAPPED CHILDREN

COMMUNITY BLUE PRINT

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
1. CASE-FINDING	You cannot help a handicapped child unless you know of his existence. Finding the handicapped children in the community is everybody's job—physicians, hospitals, schools, social agencies, civic groups, parents and citizens in general. There are two important aspects of case-finding. First, the child should be discovered as early as possible in his life so that care can be started and valuable time not be lost. Second, even though a handicapped child may be known and under care, he may not be receiving all the different components of service that make for his fullest rehabilitation. For example, a child who is receiving medical care, but no education, should be referred just as much as if he were a newly discovered handicapped child.					
2. REGISTRATION	Health Department		All diagnoses	State and Local Registers	P-1 2 3 4 5	
	Voluntary Agency		Any or all diagnoses	Local	P-1 2 3 4 5	

APPENDIX W

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
3. DIAGNOSIS AND RECOMMENDATION FOR CARE (Specialized diagnosis, consultation and recommendation for further care, preferably by multi-professional team or different professional persons cooperating in total appraisal and plan for patient.)	Diagnostic Center or Clinics (Official, Hospital, Voluntary, University, Private, School, etc. (Public Health Nursing and Social Service available to all groups)		Any or all diagnoses	District	Q-# Sessions per month	
	Minimal Teams Pediatrician Neurologist Social Worker		Epil		Q-# Sessions per month	
	Pediatrician Orthopedist Physical Therapist		Orthop		Q-# Sessions per month	
	Pediatrician Orthopedist Physical Therapist Social Worker Speech Correc'nist Psychologist		C P		Q-# Sessions per month	
	Pediatrician Cardiologist Radiologist		Heart		Q-# Sessions per month	

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
	Pediatrician Orthodontist		Orthod		Q-# Sessions per month	
	Pediatrician Surgeon Orthodontist Prosthodontist Speech Correc'ist		Cl Pal		Q-# Sessions per month	
	Pediatrician Audiometrist Audiologist Otologist Speech Correc'ist Social Worker Psychologist		Hear		Q-# Sessions per month	
	Pediatrician Audiometrist Speech Correc'ist Social Worker Psychologist		Sp		Q-# Sessions	
	Pediatrician Vision Tester Ophthalmologist		Eye		Q-# Sessions per month	

APPENDIX W

I	II		III	IV	V	
Desirable Services	**Resources**		**Handicaps Included**	**Minimum Geographic Accessibility**	**Amounts of Service**	
	Possible	**Actual**			**Code**	**Actual**
	Pediatrician Psychologist Social Worker		Mont		Q-# Sessions per month	
	Pediatrician Psychologist Psychiatrist Social Worker		Emot		Q-# Sessions per month	
	Pediatrician Plastic Surgeon Dermatologist Social Worker		Cos		Q-# Sessions per month	
	Individual Specialists (Private Hospital, Health Department, Voluntary, University, School, etc.)			District	P-1 2 3 4 5	
	Neurologist		Epil, C P		P-1 2 3 4 5	
	Orthopedist		Orthop, C P		P-1 2 3 4 5	
	Psychiatrist		Orthop, C P		P-1 2 3 4 5	
	Otologist		Hear		P-1 2 3 4 5	
	Ophthalmologist		Eye		P-1 2 3 4 5	
	Cardiologist		Heart		P-1 2 3 4 5	

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
	Orthodontist		Orthod		P-1 2 3 4 5	
	Psychologist		Ment, Emot		P-1 2 3 4 5	
	Speech Correc'nist		Sp		P-1 2 3 4 5	
	Psychiatrist		Emot		P-1 2 3 4 5	
	Cerebral Palsy Specialist		C P		P-1 2 3 4 5	
	Epileptologist		Epil		P-1 2 3 4 5	
	Plastic Surgeon		Cos		P-1 2 3 4 5	
4. GENERAL HEALTH SUPERVISION						
A. Medical	Private Physician (General Practitioner and Pediatrician		All Diagnoses	Local	P-1 2 3 4 5	
	Child Health Conference (Official, Voluntary, Hospital, Etc.)		All Diagnoses	Local	Q-# Sessions per month	
	School Health Service		All Diagnoses	Local	P-1 2 3 4 5	

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I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
B. Dental Care (Including Oral hygiene, fillings, root canal work, extractions, etc.)	Private Dentists, Dental Clinics (Hospital, University, Voluntary Agencies) Schools		C P, Cl Pal, Orthod	Local or District	P-1 2 3 4 5 Q-# Hours per week and months per year	
5. SPECIAL HEALTH CARE (living at home)						
A. Medical	Private Specialists					
	Pediatrician		Epil, Heart	District	P-1 2 3 4 5	
	Neurologist		Epil, C P	District	P-1 2 3 4 5	
	Cerebral Palsy Specialist		C P		P-1 2 3 4 5	
	Orthopedist		Orthop, C P		P-1 2 3 4 5	
	Physiatrist		Orthop, C P		P-1 2 3 4 5	
	Otologist		Hear		P-1 2 3 4 5	
	Ophthalmologist		Eye		P-1 2 3 4 5	
	Cardiologist		Heart		P-1 2 3 4 5	
	Psychiatrist		Emot		P-1 2 3 4 5	
	Epileptologist		Epil		P-1 2 3 4 5	
	Specialty Clinics or Services (Official, Voluntary, Hospital, School)			District	Q-# Sessions per month	
	Pediatric		Epil, Heart		Q-# Sessions per month	
	Neurologic		Epil, C P		Q-# Sessions per month	

I	II		III	IV	V	
Desirable Services	**Resources**		**Handicaps Included**	**Minimum Geographic Accessibility**	**Amounts of Services**	
	Possible	**Actual**			**Code**	**Actual**
	Cerebral Palsy		C P		Q-# Sessions per month	
	Orthopedic		Orthop, C P		Q-# Sessions per month	
	Physical Medicine		Orthop, C P		Q-# Sessions per month	
	Otologic		Hear		Q-# Sessions per month	
	Eye		Eye		Q-# Sessions per month	
	Cardiac		Heart		Q-# Sessions per month	
	Psychiatric, Child Guidance		Emot		Q-# Sessions per month	
	Epilepsy or Seizure		Epil		Q-# Sessions per month	
	Hospital Programs of Home Medical Care		Heart	Local	Q-# Patients carried at one time	
B. Dental (Orthodontic, etc.)	Private Orthodontists Orthodontic Clinics (Hospital, University, Voluntary Agencies) Schools Health Departments		Cl, Pal, Orthod	District	P-1 2 3 4 5 Q-# Sessions per month or hours per week and months per year	

APPENDIX W

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
C. Therapies (Medical and Educational)						
1. Physical Therapy (Other than as hospital in-patient; at frequency of at least once weekly for those who need it.)	Private physical therapist, hospital out-patient department, health departments, voluntary agencies, visiting nurse services, schools (public, parochial, private)		Orthop, C P	Local	Q-# Hours per week and months per year	
2. Physical Therapy (Consultation to and supervision of other workers and family when frequent direct therapy is not needed or available.)	Private physical therapist, orthopedist, phy-s iatrist, cerebral palsy specialists, hospitals, health departments, voluntary agencies, visiting nurse services, schools (public, private or parochial)		Orthop, C P	District	Q-# Hours per week and months per year	

I	II		III	IV	V	
Desirable Services	**Resources**		**Handicaps Included**	**Minimum Geographic Accessibility**	**Amounts of Services**	
	Possible	**Actual**			**Code**	**Actual**
3. Occupational Therapy (Other than as hospital in-patients; at frequency of at least once weekly for those who need it.)	Private occupational therapists, hospital out-patient depatements, health departments, voluntary agencies, visiting nurse services, schools (public, private, parochial)		Orthop, C P	Local	Q-# Hours per week and months per year	
4. Occupational Therapy (Consultation and supervision of other workers and family when frequent direct therapy is not needed or available.	Private occupational therapists, orthopedists, psychiatrists, cerebral palsy specialist, hospitals, health departments, voluntary agencies, visiting nurse services, schools (public, parochial, private)		Orthop, C P	District	Q-# Hours per week and months per year	
5. Speech Training (Other than in hospital or institution, at frequency of at least once weekly for those who need it.)	Private speech correctionist, university, hospital out-patient departments, health departments, voluntary agencies, schools (public, parochial, private)		Sp, Hear, Emot, Mont, C P, Cl Pal, Orthod	Local	Q-# Hours per week and months per year	

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I	II		III	IV	V	
Desirable Services	**Resources**		**Handicaps Included**	**Minimum Geographic Accessibility**	**Amounts of Service**	
	Possible	**Actual**			**Code**	**Actual**
6. Speech Training (Consultation to and supervision of other workers and family when frequent direct therapy is not needed or available.)	Private speech correctionist, university, hospitals, health departments, voluntary agencies, schools (public, parochial, private)		Sp, Hear, Emot, Ment, C P, Cl Pal, Orthod	District	Q-# Hours per week and months per year	
7. Lip (Speech) Reading (Other than in hospital or institutions at minimum frequency of once a week.	Private instructors, hospital out-patient departments, voluntary agencies, schools, health departments, university		Hear	Local	Q-# Hours per week and months per year	
8. Hearing Discrimination (Other than in hospitals or institutions at minimum frequency of once a week.)	Private instructors, hospital out-patient departments, voluntary agencies, schools, health departments, university		Hear	Local	Q-# Hours per week and months per year	

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I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Services	
	Possible	Actual			Code	Actual
9. Language Development (Other than in hospital or institution at minimum frequency of once a week.)	Hospitals, voluntary agencies, schools, health departments, university		Hear, Sp, Ment, Emot, C P	District and Local	Q-# Hours per month and months per year	
10. Orthoptic Training (Direct or Consultation and supervision for family and other workers.)	Private ophthalmologist's office, private orthoptic technicians, hospital, health department, voluntary agencies		Eye	District	P-1 2 3 4 5 Q-# Hours per week and years per month	
D. Prostheses (Fitting, preparing, training.)	Commercial companies, hospitals, voluntary agencies, schools, health departments, university, private technicians or specialists, welfare departments		Hearing aids— False eyes—Eye Eyeglasses—Eye Braces, limbs—Orthop C P Oran and Dental—Cl Pal Orthod	District	P-1 2 3 4 5	
E. Home Nursing Service	Hospitals, Health Departments, Visiting Nurse Services, Voluntary Agencies		C P, Orthop, Cl Pal, Cos, Heart	Local	Q-# Hours per week and weeks per year	

APPENDIX W

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
6. HOSPITAL OR INSTITUTIONAL CARE						
A. Hospital Medical Care (Non-surgical)	Hospitals		Orthop, Heart, Cl Pal, Hear, Epil, C P, Emot, Eye	Local or District	Q-# Beds usually available for this service	
B. Hospital Surgical Care	Private Specialists, Plastic Surgeon, Orthopedist, Oral Surgeon, Ear, Nose and Throat Surgeon, Eye Surgeon, Neuro Surgeon, Thoracic Surgeon		Cl, Pal, Cos C P, Orthop, Cl Pal Hear, Cl Pal Eye Epil, C P Heart	District	P-1 2 3 4 5	
	Hospitals		Cl Pal, C P, Hear, Epil, Eye, Heart, Cos, Orthop	District	Q-# Beds usually available for this service	
C. Convalescent Institutional Care (Temporary stay primarily for medical care other than acute illness or surgery.)	Hospitals, Convalescent Institutions		Orthop, Heart	District	Q- Usual bed capacity	

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Services	
	Possible	Actual			Code	Actual
D. Long Term Institutional Care	Official, State Voluntary, Private		Ment, Severe physical disability, Severe uncontrollable epilepsy, Blind	District and State	Q-Usual bed capacity	
E. Detention Homes (Short term stay prior to placement.)	Social Agencies (Official, voluntary) Juvenile Courts		Emot	District	Q-Usual bed capacity	
F. Foster Home Care	Social Agencies (Official, voluntary), Health Department, Voluntary Agencies		All diagnoses	District	Active caseload	
7. EDUCATION						
A. Daytime Education —Admitted to Regular Classes	Schools (Public, private, parochial)		All diagnoses except Ment	Local	P-1 2 3 4 5	
B. Daytime Education —Special Units (full or part time)	Schools (Public, private, parochial)		All diagnoses	Local and District	Number of children that can be handled at one time or number of teacher hours per week	

APPENDIX W

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Service	
	Possible	Actual			Code	Actual
C. Home Instruction	Schools (Public, private, parochial)		C P, Orthop, Heart, Epil	Local	Number of teacher hours per week	
D. Education for Children in Hospitals	Schools (Public, private, parochial) Hospitals		C P, Orthop, Heart, Emot, Cos	Local	Number of teacher hours per week	
E. Residential School (Temporary, not full agreement on need.)	Official, State, Voluntary, Private		Hear, Eye, C P	District	Capacity	
	Study and Treatment Homes, Correctional Institutions		Emot	District	Capacity	
8. GUIDANCE, RECREATION AND EMPLOYMENT						
A. Recreation (organized program)	"Y" and Church Groups, Settlement houses, etc. Nursery schools, Play groups for adolescents, young adults		All diagnoses	Local and Regional	Capacity	
	Summer camps, Schools					

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Services	
	Possible	Actual			Code	Actual
B. Vocational Guidance (Counseling, Training, Placement)	Division of Vocational Rehabilitation Voluntary Agencies, Schools		All diagnoses	Local and District	Active Caseload	
C. Employment (Organized Programs)	Sheltered Workshops, Home Employment, Sheltered Work		Eye, Epil, C P, Ment, Orthop, Heart	District Local	Capacity	
	Chamber of Commerce, Employers Ass'ns, Unions		All diagnoses except Ment	District	Q-[illegible] Persons served per year	
D. Guidance, Counseling and Social Work (Direct to patient and/or family)						
1. Medical and/or psychiatric social work	Hospitals, clinics, health departments, voluntary agencies, private		All diagnoses	Local or District	Active Caseload	
2. Child welfare social work	Welfare departments, children's institutions, voluntary social agencies		All diagnoses	Local or District	Active Caseload	

APPENDIX W

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Services	
	Possible	Actual			Code	Actual
3. General social service	Welfare departments, voluntary social agencies		All diagnoses	Local or District	Active Caseload	
4. Visiting teaching	Public, private or parochial schools		All diagnoses	Local	Active Caseload	
5. Psychological	Private, university, clinics		All diagnoses	Local	Active Caseload	
E. Guidance, Counseling and Social work (Consultation to and/or supervision of other professional workers when adequate direct service is not needed or available)						
1. Medical and/or psychiatric social work	Hospitals, clinics, health departments, voluntary agencies, private		All diagnoses	District	No. of hours per week and months per year	
2. Child welfare social work	Welfare departments, children's institutions, voluntary social agencies		All diagnoses	District	No. of hours per week and months per year	

I	II		III	IV	V	
Desirable Services	Resources		Handicaps Included	Minimum Geographic Accessibility	Amounts of Services	
	Possible	Actual			Code	Actual
3. General social service	Welfare departments, voluntary social agencies		All diagnoses	District	No. of hours per week and months per year	
4. Psychological	Private, university, clinics		All diagnoses	District	No. of hours per week and months per year	
F. Parent Education Program	Health department, Parent organization of school, university workshop and courses, professional organizations, voluntary		All diagnoses	Local and District	P-1 2 3 4 5	
9. PUBLIC EDUCATION, PREVENTION, PROFESSIONAL, TRAINING AND RESEARCH	Items 1 through 8 are direct services to handicapped children and their families. In addition, there are a number of indirect ways in which the handicapped children, their families and the community in general can profit. These are: a) PUBLIC EDUCATION about handicapped children, the size of the problem, its causes and the economy to the community that results from earlier and more effective rehabilitation; b) PREVENTION of handicap by individual, group and community efforts; c) PROFESSIONAL TRAINING of more workers to fill present vacancies and permit expansion of services; d) RESEARCH in universities and other places so that we may broaden our knowledge on the subject and help to reduce the impact of the problem upon the community.					
10. OTHER SERVICES						